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LATEST INTELLIGENCE

CONCERNING THE CASE OF

APOTHECARIES' COMPANY v. SHEPPERLEY.

HIGH COURT OF JUSTICE—EXCHEQUER DIVISION

ON November 13, before the Lord Chief Baron and Baron Cleasby, Mr. Gore formally mentioned the case as that was the last day for moving for a new trial, and asked that the time might be extended for two days.

On the following day (November 14).

Mr. DAY, Q.C., applied for an extension of time for moving in the case. He had been instructed to move for a rule for a new trial on behalf of the plaintiffs, upon the ground of misdirection and verdict against the weight of evidence. It would be very convenient when the motion should be made that the learned Judge who presided at the trial should be present, and the matter had already been taken to the Court of Appeal in the form of a motion for judgment, but it was doubtful whether that course would succeed. He would be glad if their Lordships would allow it to stand over until the decision in the Court of Appeal had been given.

The LORD CHIEF BARON: How long do you want it to stand over? Perhaps some further delay might arise on account of an appeal to the House of Lords.

Mr. DAY: No, my Lord. I only ask for a fortnight.

The LORD CHIEF BARON: The difficulty that I have is as to the indefiniteness of the delay; because how can you possibly guarantee that there shall be no appeal from the Court of Appeal to the House of Lords?

Mr. DAY: I would at least ask that the case should be allowed to stand over until Baron Pollock is able to attend, upon the ground that it would save public time and be more convenient to move in the presence of the learned Judge who tried the case.

Baron CLEASBY: When will the motion come on in the Court of Appeal?

Mr. DAY: A notice of 14 days was given on November 13, and the case would be heard upon the first Wednesday after the expiration of that time. The verdict was for the defendant, and the costs are quite safe.

The LORD CHIEF BARON: Yes, no doubt; but what is the position of the defendant?

Mr. DAY: He is a chemist and druggist of great respectability. The plaintiffs are very responsible persons. They have a large stock of drugs. (Laughter).

The LORD CHIEF BARON: There is no chance of the defendant being distressed for want of money? How much time do you want?

Mr. DAY: It will be safe if I said three weeks.

The LORD CHIEF BARON: Let it be so.

The motion was allowed to stand over accordingly.



The prosecution of Mr. Shepperley by the Apothecaries' Society occupied the Court of Exchequer a day and a half last week, and resulted in a verdict for the defendant, with costs. Two charges of counter practice were specifically presented, but the jury found for the defendant in both.

Baron Pollock's summing-up, however, indicates that the law is in favour of the claim made by the apothecaries. Several influential organs of public opinion have commented on this case, and all express satisfaction at the verdict. The apothecaries will learn that they cannot carry out their self-seeking policy without counting with the public as well as with chemists.

The Pharmaceutical Council in October resolved to add seven annuitants to the Benevolent Fund, bringing the number to 30. Afterwards one of the existing pensioners died, and at the November meeting it was proposed by Mr. Shaw to give eight annuities instead of seven. Mr. Sandford urged that this would be out of order, and ultimately the proposal was defeated by ten votes to eight. It was resolved to prepare a new catalogue of the library and send a copy to every member and associate in business. It was stated that the appeal case of the Society v. Mackness raising the right of co-operative stores to sell poisons would very shortly be argued. Attention was directed to a society called "The Homœopathic Pharmaceutical Society," and the secretary was instructed to obtain full particulars as to its constitution.

At the meeting of the Pharmaceutical Council of Ireland, on the 6th inst., Professor Tichborne in the chair, resolutions were passed to send, in future, official reports of the proceedings of the Council to the editors of *THE CHEMIST AND DRUGGIST* and of the *Pharmaceutical Journal*. A committee was appointed to consider the subject of arranging for a regular official medium, and letters from Mr. W. C. Dobbin, of Belfast, and Mr. J. Walters, of Kilkenny, respecting a proposal made by the editor of *THE CHEMIST AND DRUGGIST*, were read to the Council. Letters from several members were read drawing attention to alleged infringements of the Pharmacy Act. The Council, after considerable discussion, were of opinion that no case likely to lead to a conviction had been laid before them, and the secretary was instructed to reply that the whole question was under the consideration of the Council.

A startling announcement has been made to the Paris Academy of Sciences by Mr. Norman Lockyer, who believes he has obtained proofs by spectrum analysis of the compound nature of many of the bodies which we now regard as elements. Mr. Lockyer will shortly read a paper on the subject before the Royal Society.

The Paris Exhibition closed on the 10th inst., after being inspected by over twelve million persons. The French Government has seen fit to "crown the edifice" by an enormous lottery, and it is a melancholy reflection that as much money was taken for that in three or four weeks as the Exhibition brought in during six months of its existence.

There were about 53,000 exhibitors in the Exhibition, and something over 30,000 awards have been distributed among these. Several stories are current in the Exhibition respecting firms whose products never got to Paris at all receiving medals, but these probably originate with the formidable body of omitteds and too-little-appreciateds. The discontent is perhaps above the average, and large numbers of the exhibitors have refused their awards, the "honourably mentioned" considering they had a right to a bronze disc, and the bronzes asserting their claims to the Nevada product.

A closer acquaintance with the Weights and Measures Act of last session removes some of the extravagant apprehensions at first entertained, but it still seems to be defective. Thus one clause permits the Board of Trade to verify metric weights and measures if satisfied they are not for the purpose of trade; another clause declares that a dealing shall not be invalid because it is expressed in terms of the metric system. The apothecaries' weight, too, which may

be used in retail dealing, may not be used for wholesale transactions.

Some chemists have been fined at Sheffield, under the Explosives Act, for having on their premises fireworks and gunpowder, the said premises not being duly registered. One chemist had registered his premises on November 8, 1876, and was not aware that it was necessary to renew the registration. Others may likewise have overlooked the requirement.

We publish a list of registered chemists and druggists who, not being found at the addresses given in the register, will have their names erased from the next edition of the work, unless they declare themselves before December 31, 1878. We advise all readers to examine this list for their own or friends' names.

It will be remembered that last June the Lord Chief Justice, in the Court of Queen's Bench, ruled that an article purchased merely for analysis could not prejudice the purchaser. A Bill was introduced into Parliament to remedy the defect thus revealed, but it was not passed. The same defence having been raised in a case at Bow Street, Sir James Ingham decided in favour of the defendant, confessedly to have the question settled by a superior court. Mr. Chance, at Lambeth the other day, told the Camberwell Vestry Clerk that he should not accept any such defence, as he considered it made the Act nonsense, and he should hold this opinion until over-ruled by a superior court. Mr. De Rutzen, at Stepney, also, a few days previously refused to accept the objection, and convicted the defendants on an inspector's charge.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

BY this time most of our contributors are heartily tired of the chemical compounds of the Pharmacopœia, and would no doubt be glad to have an opportunity of extending their analytical work in some other equally useful direction. There are many chemical substances, not directly employed in pharmacy, which are nevertheless of great interest to the student, either on account of their importance in the chemical industries, or because of their suitability for the purposes of study. We propose, accordingly, to select a common mineral as the subject of the next exercise. It is to be submitted to a systematic qualitative analysis, so as to detect all the elements contained in it, either as essential constituents or as accidental impurities. In reporting results the name of the mineral is to be mentioned and a detailed account of the analysis is to be given.

Students who wish to compete should send us their names and addresses before the 20th inst. Samples of the mineral will be forwarded on the 25th inst.

Students' reports will be received up to December 14.

ANSWERS.

The subject of the last exercise was *Acidum Citricum* B.P., adulterated with 20 per cent. of tartaric acid, and containing, as accidental impurities, traces of iron, calcium, and of the sulphuric radical.

Both citric and tartaric acid are easily detected and identified: the analytical distinctions between the two acids are not, however, very well marked, and, as there is a considerable difference in their commercial value, the adulteration of citric with tartaric acid is not an unlikely fraud, and one that may very well escape detection.

The principal distinction between the citrate and the tartrate of calcium is that the former is insoluble, while the latter is soluble in cold solutions of potassium or sodium hydrates. An excess of lime-water added to cold solution of a citrate produces no precipitate, but under similar circumstances tartrates yield a precipitate. If the citrate

solution, with the excess of lime-water, be boiled, a precipitate forms, but 'as the solution cools it again dissolves, calcium citrate being more soluble in cold than in hot water. Silver citrate, as well as silver tartrate, is decomposed when boiled with water, but the former much more slowly, so that this reaction is also, to a certain extent, distinctive. The precipitate which tartrates give with potassium solutions—the well-known potassium acid tartrate—serves also to distinguish between the two acids, as the potassium citrates are readily soluble in water. The influence of the alkaline tartrates and citrates on the solubility of other substances must always be borne in mind in examining solutions containing these salts. Their solutions not only act as solvents of certain tartrates and citrates, such, for example, as those of calcium, but they also dissolve a number of otherwise insoluble salts, of which the most important are calcium phosphate, calcium oxalate, barium sulphate. There are also many oxides and hydrates which are not precipitated by alkalies in the presence of alkaline citrates, the most prominent being those of the members of the iron group.

PRIZES.

The First Prize for the best analysis has been awarded to WILLIAM STROUD, 23 Wine Street, Bristol.

The Second Prize has been awarded to T. G. NICHOLSON, Merc Street, Diss.

Marks Awarded for Analyses.

William Stroud (1st prize)	..	..	..	..	..	90
T. G. Nicholson (2nd prize)	..	..	..	..	..	85
Henry Sieberg	..	..	..	..	..	83
Adonis	..	..	..	..	..	80
Chrysophanic	..	..	..	..	..	80
J. H. F.	..	..	..	..	..	75
Anon.	..	..	..	..	..	70
J. James	..	..	..	..	..	65
W. H. R.	..	..	..	..	..	60
J. P. Harold	..	..	..	..	..	25
Excelsior	..	..	..	..	..	20
J. F. Croshaw	..	..	..	..	..	15

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

*** All Communications should include the names and addresses of the writers.

Chrysophanic.—Organic matter often greatly interferes with the reactions by which many inorganic substances are separated or recognised; the citrates and tartrates are particularly objectionable in this respect; it is, therefore, desirable to get rid of them before attempting to detect the metals. In this case the best plan was to ignite the substance and examine the residue in the ordinary way.

J. H. F.—However likely the presence of the calcium in the form of sulphate was, you ought not to conclude that this was the form in which existed without some evidence.

Anon.—Your paper was more a dissertation on analysis in general and on the preparation of citric acid than a report on your work. Your conclusions are of little importance unless you show that they were arrived at by a thoroughly scientific process.

J. James.—See remarks to "W. H. R."

W. H. R.—The quantity of salt sent to each student was intentionally small. With an unlimited supply of material you could no doubt make a very elaborate analysis in the course of time, but you learn more by being compelled to consider your plan of operations and to avoid mere guess work.

J. P. Harold.—The smell emitted on burning the substance was quite distinct from the characteristic odour produced by tartrates. You ought to have made a more thorough examination for organic acids.

Excelsior.—You must surely have observed what a very insignificant residue was left when the substance was ignited; had a notable quantity of potassium been present it would, on ignition, have been found in the residue as carbonate. There is no excuse for your not having detected tartaric acid.

J. F. Croshaw.—When you heated the substance in charcoal and observed that it sank into the charcoal, you may remember that the temperature employed to effect this result was very low: from the nature of the case it cannot have greatly exceeded the boiling-point of water; you may also have observed a copious disengagement of aqueous vapour. These circumstances ought to have prevented you from confounding the phenomenon with that which is observed when salts of the alkalies are fused. Try a few experiments on this point, and you will not be likely to make the mistake again.

Pharmacalin.

GOULARD OF GOULARD'S WATER.

AMIDST all the changes which Pharmacy has undergone a few old-fashioned remedies have stood the test of time. One of these, called Extract of Lead, or, more commonly, Goulard's Extract, is still retained in continental pharmacopœias, and in our own. The individual who brought it prominently into notice and materially improved its composition was Monsieur Thomas Goulard, Surgeon-Major to the Royal and Military Hospital at Montpellier. In 1760 this successful operator published a "*Traité des Effets des Préparations de Plomb*," in which he recounted his mode of treatment, and the cures which he had been able to effect. The book is a diary of cases illustrating clinical remarks, and it is free from that extreme self-laudation which disfigures many similar productions. A pharmacist having presented us with a copy, it will not be uninteresting, perhaps, to the general reader if we make a few extracts from a once celebrated treatise, which bore the motto, "*Redeunt Saturnia Regna*." The work is divided into eleven chapters, touching upon external inflammations, contusions, burns, external suppurations, cancers, sprains, and other maladies including gout and rheumatism. All these are described in turn, and to each section are appended what the author terms "Observations," but which in modern language would be designated "Cases." Three such will serve as a specimen of the rest.

"*External Inflammation*.—The Bishop of Montauban was seized, in the year 1753, with a violent inflammation in his leg—the redness and pain were very great, and the skin was covered over with a number of little bladders full of reddish water. Mr. Haguenot, councillor-at-law and professor of the University, was sent for. He desired that I might be consulted. This gentleman was witness of the immediate relief my medicine gave the patient; for, in a short time, this respectable prelate was able to go abroad, and in eight days to perform his ecclesiastical functions." There is a certain simplicity about this narrative which speaks favourably of the writer. Would any pharmacist of the nineteenth century have cured a bishop and talked so quietly about the matter?

"*Burns*.—The Bishop of Castres, who had made use of my remedy for many years in his diocese, for the poor, has done me the honour to tell me that a man who had his whole body burnt with gunpowder, from the intense pain threw himself into a river; but he was scarcely got out again before the pains returned upon him with great violence. When all other remedies had been made use of without effect, this prelate caused compresses of the Vegeto-mineral Water to be applied to the part. The man was immediately relieved of his sufferings and cured in a few days." We may imagine that he had a strong constitution.

"*Sprains*.—During my stay at Genoa I assisted at a consultation with Dr. Balby, and another of the same Faculty, at the Convent of Portonia, which was held on Madame Morande's account, one of the Religious. This lady had the tendons of her hand so contracted that it had been closed up and motionless for six years past. She informed us that she had in vain applied various remedies which had been prescribed to her by the most skilful of the Faculty. She attributed her complaint solely to her employment for many years of cutting the portions of food for the Religious with a very large knife. I was determined to make use of my preparations with the Extract of Saturn; and this the more willingly as I had learned by experience how very proper

this metallic remedy was to resolve the inspissated juices which choke up the vessels, and even the synovia in the articulations; as likewise to restore weak parts to their proper tone, especially when lost by an accident. [Details of treatment omitted.] Our Religious was in a condition, in less than a month, to write, sew, and attend to her usual vocations, except that one of cutting the portions." The cure surprised Monsieur Goulard not a little, and it was remarked by the whole town of Genoa. An offer was made him to settle in that district with the reward of a much larger pension than was, by an old foundation, bestowed upon French surgeons who resided in that place. It must not be supposed that the doctor confined himself either to the Religious or to dignitaries of the Church. He was an active practitioner, and could relate his experiences drawn from practice in the hospitals of Lille, Dunkirk, Arras, Bethune, Douai, Gravelines, and elsewhere. He had the satisfaction of curing more than 2,000 patients of the itch. On his list had been a stone-cutter's wife at Montpellier, and the child of M. Cost, the gaoler of the Citadel; the nephew of M. Roger, first surgeon to His Royal Highness Don Philip, and a drummer's wife of the regiment of Bresse; a page of the Duke of Richelieu, a Protestant minister who had received a pistol-shot in the superior part of the forearm, and a gunner who had been accidentally blown up at the cannon's mouth; the Chevalier Desquilles, a Saxon nobleman who was attended by many eminent surgeons, and the daughter of one Ayrel, a shoemaker; not to mention a young lady, *passim*, or a woman of Antibes or any other town to which Monsieur Goulard paid a visit. It is needless to explain that these all recovered, and lived historically ever afterwards. The treatise ends with an account of the composition of the Extract of Saturn, and of no less than thirteen preparations of which it formed the basis. Some of these, such as the Cataplasm, the Nutritum, or the Pomatum, have not survived their reputation; others, under the old or altered names, are still employed, as the Vegeto-mineral Water, the Cerate, and the Saturnine Plaster. The Tripharmacum was a lead preparation, and was thus made: Eight lbs. of litharge of gold, 16 lbs. of common oil, vinegar q. s. Mix in a proper vessel the litharge with the oil and vinegar; let the whole boil together (keeping it well stirred with a wooden spatula) to the consistence of a plaster. If you perceive the litharge not sufficiently dissolved, or the plaster not sufficiently boiled, add a fresh supply of vinegar. When mixed with equal parts of simple diachylon to make Compound Tripharmacum Plaster, it was not unlike the Emplastrum plumbi of modern pharmacy.

There was one remedy which caused Monsieur Goulard much satisfaction—it was a pomatum thus combined:—Take 2 quarts of common water and put them into an earthen pipkin; add 2 oz. of the Extract of Saturn, and 18 oz. of common soap cut into slices; dissolve and add one drachm of camphor. "I have again the pride," wrote the chronicler, "in declaring here, that it is to the Maréchal de Richelieu we are indebted for the addition of the soap to the original composition. This nobleman, who applies himself to the study of every science, advised me in the year 1747, during my stay at Genoa, to make an addition of soap to the old prescription."

It has been pleasant to revive the recollections of this curious book, which differs essentially from the bombastic treatises which were common at the time. Allowing for pardonable warmth of colouring, the sketch of the old French surgeon was not exaggerated. In his own day he advanced the art of healing, and much of his work has stood the test of time.

THE MAHWA TREE.

Mr. E. Lockwood has described in the "Journal of the Linnean Society" the varied usefulness of the Mahwa tree, which he calls a "fountain yielding food, wine, and oil" to the inhabitants of the country where it grows. It grows in the plains and forests of Monghyr, is a member of the Sapodilla family, the *Bassia latifolia* of botanists. The tree attains 40 to 50 feet in height, with numerous spreading branches, forming a close, shady, rounded crown. Standing on the Kharakpoor hills, 250 miles north-west of Calcutta, a hundred thousand of the trees are visible in the plains below. They might be mistaken for the mango, but while the mango is uncertain in its yield, the crop of mahwa never fails. The part eaten is the corolla, which is succulent, and falls in great profusion during March and April. Both men and animals enjoy the feast, for the poor villagers collect the fallen corollas, while birds and squirrels help themselves among the branches. At sunset the peacock and the jungle fowl steal out from the jungle for their repast, while the deer and bear, bent on the same object, fall victims to the bullets or arrows of the hunters who are concealed over head.

Mr. Lockwood was for four years a magistrate in Monghyr, and he calculated that there were not far short of a million trees in that district alone. Each tree yields two or three cwt. of corollas, so that the total yield of flowers cannot be far short of 100,000 tons. Deducting a vast amount consumed by bird and beast, by far the greater portion is collected by the natives, whom it supplies with food. The nourishment is good, for the Santhals, who use it largely, are plump and happy, and are said to be the only people in India who like a hearty laugh. The mahwa had its share in alleviating the Indian famine: every relieving officer knew well the peculiar odour of the corollas as they passed through the villages where they were stored. During the scarcity which prevailed at Behar, 1873-74, the crop, which was unusually abundant, kept thousands of poor people from starvation. We come now upon something pharmaceutical. The residue not eaten is taken to distilleries, and there, in a rude and rather wasteful manner, is converted into a strong-smelling spirit, much like whisky. The Government holds a monopoly of spirit manufacture and at the date just mentioned there was a duty of 8s. for every cwt. of the raw material as it entered the distillery, on the supposition that such quantity would only yield 3 gallons of proof spirit. The duty was subsequently raised on its being found that in England over 6 gallons of proof spirit could be produced from 1 cwt. of material. It is suggested that it would be to the advantage of the Indian Government to introduce patent stills. An Italian took out a patent for removing the essential oil; he, in fact, manufactured what we should term a "cleaned spirit." A rapid fortune seemed likely to reward his ingenuity; orders poured in upon him from Calcutta, and the demand promised to be immense. "Just," says Mr. Lockwood, "as the inventor had taken up a whole side of the Government distillery, and got all his preparations complete, the rum distillers in Calcutta petitioned the Board of Revenue, and a prohibitive duty was imposed, which completely put an end to the manufacture of scentless mahwa spirit. A sample was sent to the Chemical Examiner at Calcutta, and he reported that the spirit was pure and wholesome, and came very near good foreign brandy."

The economies of the mahwa are not yet exhausted; the flowers are still more useful for feeding cattle, and again the same recommendation may be advanced, that while the potato, maize, and barley are uncertain in their crop, there has never been a season when these edible corollas have

been known to fail. Their keeping powers are excellent—a ton, dried and put into sacks, were exported, and, examined after two years' time, were found to be undamaged.

The fruit, which follows after the falling of the corolla, yields seeds from which a greenish-yellow oil is extracted. According to Mr. Cooke's report on "Oils and Oil-seeds in India," it is worth 35*l.* a ton, and is used in soapmaking. Probably, there is a commercial future for the mahwa, and it is a matter worthy of consideration whether a demand for this article in England would not lead to a profitable result.

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THE FUTURE OF PHARMACY; EXAMINATIONS.

The vexed question of the value of examinations is more complicated than ever. We make no allusion—not the least—to the value of the examination system as the sole legal means with which we are acquainted of separating the qualified from the unqualified pharmacist. Respecting that point there is no doubt, and every examined man should feel grateful that the distinction between himself and the unqualified should have been made compulsory. We allude solely to the value of an examination viewed as a test of educational acquirement. It rests with every individual student to turn the examination system into an unmixed advantage, and he may do so by making a successful pass, which rightly gives him an official standing, but is the commencement of, or the initiation into, continued and systematic study.

Very many pharmacists act up to this idea, and assuredly they will meet with their reward. Most of that reward is obvious—position, which is capital; respect from others, and manufacturing skill. But the one chief gain of practical, advanced knowledge is the power of utilising any and all opportunities which the age presents. Such a control over circumstances does not appear to us within the grasp of a Minor qualification. We take the matter in a business light, and, while stating our opinion, would deprecate the thought that any censorious criticism is intended.

In face of the co-operative stores, which sweep away, or at least injure, the trade in sundries; and in face of that spirit of competition which, in order to meet the difficulty, has set up attenuated prices, we would dissuade a personal friend from embarking upon pharmacy as a trade unless fully qualified to make the very best of the situation. Patent medicines bear a diminished profit, and sundries follow the same rule. Seeing, then, that these avenues to making money are obstructed, let the pharmacist compete on other grounds—fortunately they are higher. Reputation never stood better in the market; the art of analysis was never more productive; and all the co-operative stores together cannot reason out a single process by which their own interests or the progress of pharmacy might be promoted.

We are sure that some of our readers would like to know the new decisions with regard to Pharmaceutical Examinations which have just been confirmed in France. On August 31, 1878, official regulations were published respecting the acquisition of the title of Pharmacien of the Second Class. The details of the Major Examinations are as follows:—

In accordance with the decree of July 12, 1878, and specially as regards Articles V., VI. VII., and X., the Superior Council of Public Instruction thus directs:—

Art. I. The final examination of the fourth year of study to obtain the superior diploma of Pharmacien of the First Class is divided into written questions, practical work, and a *privé-voce* examination: the last only is public. No one is admitted to the *privé-voce* who has not given satisfaction in

the two first. The candidate who fails in one subject loses the benefit of the rest.

Art. II. The written examination bears upon two distinct subjects, chosen by the chairman of the Board, one relating to physico-chemical and the other to natural science. Time allowed, four hours.

Art. III. The practical work relates, at the choice of the candidate, either to physico-chemical or to natural science. In the first case it includes (a) an experiment in physics, (b) a preparation or chemical analysis, (c) the determination of elements relating to *Materia Medica*. The subjects of the two first are chosen from amongst those indicated in the programme of the licence in physical sciences.

In the second case it includes (a) a preparation of vegetable anatomy and a preparation of zoological anatomy; (b) an analysis of morphology, or of a vegetable organism; (c) the identification of a certain number of vegetables and animals, as well as pharmaceutical products taken from the organic kingdom. The anatomical preparations will be accompanied with (1) a sketch representing the parts mentioned, (2) a summary description of these parts, (3) indication of the place occupied in the vegetable or animal kingdom by the species under examination.

Art. IV. Time allowed for the *viva-voce* , not less than one hour. It will relate, at the choice of the candidate, to questions on physics or chemistry, or to questions on botany and zoology, indicated in the programme for the licence in science.

Art. V. Each examiner expresses his opinion by means of a ball; these are differently coloured, and have the following significations:—A white ball means very well, a red and white ball means well, a red ball means pretty well, a red and black ball means poor (*médiocre*), and a black ball means bad. Candidates who get two red and black balls, or one black ball, fail to pass.

(Signed) A. BARDOUX.

Paris, July 31, 1878.

COUNTER PRACTICE.

THE SOCIETY OF APOTHECARIES *v.* SHEPPERLEY.

AT THE EXCHEQUER COURT.

THE case of the Apothecaries' Society *v.* Shepperley appeared in the notice-paper of the Exchequer Court on Monday, November 4, and by Thursday morning it had reached the top of the list. It was tried before Baron Pollock in the second Exchequer Court, a miserable little box with accommodation for barely 20 persons beyond the judge and jury, counsel and solicitors.

Probably the occurrence of the trial was not very generally known, but whatever was the reason the attendance of chemists was very small indeed on either of the two days which it occupied. The knowledge that it was a "test action," and that eminent counsel were engaged, brought, however, a large number of law students into the Court, while Sir Henry James's speeches were listened to by a rather thickly-massed group of budding barristers, and rich models of forensic eloquence these speeches proved.

At first there was a brief legal discussion respecting the pleadings, but this was soon got over, and Mr. Day, Q.C., made the opening speech on the part of the plaintiffs. He was studiously moderate; said the action was not brought to recover penalties so much as to obtain a definite decision as to the rights of chemists and druggists in respect to the treatment of simple complaints. It had been the desire of

the Legislature that persons authorised to practise medicine should possess some qualification conferred after examination. It might be that some chemists were excellently qualified to treat disease, but the legislature had decided rightly or wrongly in 1815 that only such persons as had satisfied a certain test should be permitted so to act. Some persons might be inclined to prefer free trade in medicine; they had a perfect right to their opinions, but this was not the question for the jury to decide. Referring to Section 23 of the Apothecaries' Act as the one on which the defendant relied, the learned counsel maintained that the object of that clause was expressly to protect the chemist in his business of buying, preparing, compounding, dispensing, and vending drugs. Without that clause a chemist compounding or dispensing medicines would have been infringing the Act. The plaintiffs did not question his right to do these portions of an apothecary's duties; what they did question was his right to prescribe drugs. In the conclusion of his very able speech the learned counsel in his solemnest manner (and no one ever accused Mr. Day of levity), urged on the jury the frequent danger of these so-called "simple complaints." To diagnose one disease from another required great knowledge and great experience. After hitting on the term *diagnose* the learned counsel seemed reluctant to part with it. He rolled it out with a good deal of effect several times over, and urged that the defendant in venturing to diagnose Mr. Jolly Death's simulated sore throat had thereby infringed the statute. Chemists, he said, were quite at liberty to fit themselves for and pass the examination if they pleased, and then practise as much as they pleased. But what the Legislature had intended to prevent was their practising on the poor and ignorant until they had passed some medical examination.

Having delivered his speech, Mr. Day left the Court, and the rest of the case was conducted on behalf of the plaintiffs by Mr. Morgau Howard, Q.C., and Mr. Stanger.

The last-named counsel was entrusted with the examination of the chief witness for the prosecution, Mr. Thomas Jolly Death. This person gave his evidence with obvious relish and self-satisfaction. He had applied, it appeared, to Mr. Shepperley for some medicine for a sore throat, and, according to him, Mr. Shepperley had examined him and prescribed for him. Mr. Stanger asked if anything occurred while he (Death) was in defendant's shop, and it seemed as if a new case was to be sprung on the defendant, but Sir Henry James promptly objected, and claimed that as particulars of two cases only had been given, the plaintiffs were not at liberty to introduce fresh charges. The Judge sympathised with this view, and Mr. Stanger withdrew his question. When he sat down, Sir Henry James cross-examined the witness, and it was probably this cross-examination which ensured the defeat of the apothecaries. He first elicited that Death had at times acted as a private detective in criminal cases. The object of this question was, we suppose, to show the jury what kind of steps the plaintiffs had taken in order to get a case. His instructions in this case were then inquired about, and it appeared that the solicitor who first got up the case had told Death to try to induce the chemist to examine him, feel his pulse, and so forth. Mr. Death was getting on very well in his cross-examination, when Sir Henry James asked him pleasantly enough what was the matter with him on the day when he applied for medicine. Death had apparently expected this question, and had got his little joke ready. "I thought I was all right," he said, "but when the chemist told me I wasn't I began to think I must be ill." This sally won the laugh which is so consoling to a witness, but it was a short-lived triumph. Turning sternly on him, Sir Henry James

asked Death to tell the jury if his statement to Mr. Shepperley was true or false. The witness tried to fence with the question, but a distinct answer was insisted on, and then he said he believed he had a little soreness in his throat at the time. Not enough, however, he told the Judge to make him really require advice. "How much have you had for this?" asked the counsel. "Nothing," said Death; he was to be paid when the case was concluded. "Oh, then you are to be paid according to results?" This, however, the witness denied, and Mr. Stanger thought that denial sufficiently important to be reiterated before Mr. Death left the box.

Mr. Hatherley, a Nottingham surgeon, was next put in the box, apparently to prove something with regard to the second case, the essential witness being in America, but as Sir Henry James said he should call Mr. Shepperley it was agreed to obtain the evidence from him and to recall Mr. Hatherley if necessary.

Sir Henry James then opened the case for the defence. Commencing his remarks in a sarcastic vein he asserted that the only imposition that had been practised had been on the part of those who had instructed his learned friend. These gentlemen were eager to get into their own hands the business—for it was no longer a profession if treated in this way—which goes to the chemist and druggist. Were chemists no longer to exercise their discretion? that, he maintained, would be the effect of a verdict for the plaintiffs.

The learned counsel's argument was mainly this:—First, that the assumption of certain isolated occupations, which formed a part of the duty of an apothecary, did not cause the person so acting to "practise as an apothecary." A chemist makes up the prescriptions of physicians, and this is part of the duty of an apothecary, but a chemist is not thereby practising as an apothecary. It was necessary to prove that the defendant had really held himself out as an apothecary to give medical advice. Chemists are required by law to be skilled in the knowledge of drugs and medicines for the express purpose that they should exercise their discretion in connection with the sale of their wares. They were not at liberty to undertake the general treatment of a patient. That would be acting as an apothecary; but it was their duty as well as their right to give the best article they could to their customers for the particular case in which it was required, in just the same way as a tailor might advise a customer to have a thicker or a thinner garment. The question came to this, whether a chemist was to make up blindly every article which he was asked for, or whether he might use his discretion. On this ground, elaborated at considerable length, Sir Henry James claimed that his client had not infringed Section 20 of the Act; that is, had not practised as an apothecary. Even if he had, however, he was protected by Section 28, which permitted him to carry on his business as fully and amply as it was carried on before 1815. Baron Pollock hereupon intimated that his view of that section was that a chemist's business, both before and after 1815, was limited by the definition of it contained in the Act. Sir Henry James replied that that would be quite sufficient for his purpose. He maintained that the terms "dispensing and vending" fully covered all that his client had done, and he quoted the word "dispensary" to show that such a meaning was attached to the term as the selection of drugs with discretion. Commenting on the case before the jury the learned counsel spoke strongly on the conduct of the prosecutors in employing Death to trap the defendant. Although an attorney and a surgeon had consulted together and told this man what he was to do, and though he had tried by inducement and question to make Mr. Shepperley act as an apothecary, this was all that had come of it.

The defendant had not in any sense attended Death. The latter asked for some medicine, and it had been given. He had charged a fair price for it, and had not charged a farthing for his advice.

There were about half-a-dozen of the venerable old chemists present with whose faces and evidence we have now become familiar. They were treated with marked respect both by counsel and Judge. The cross-examination of two of them by Mr. Morgan Howard was a model of good taste. When the third came forward the foreman of the jury intimated that it was a waste of time to proceed with this evidence, as they were quite satisfied that the custom before 1815 had been established.

Mr. Shepperley was then examined, and his account of the interview with Death was in some respects different from that given by Death himself. He declared that Death himself opened his mouth and asked him to look at his throat, that he did not tell him to call again, and that he did not advise him to give over smoking. Mr. Morgan Howard cross-examined this witness at some length, the chief point made being that the witness was much more distinct in his remembrance of the circumstances connected with the two cases now than he was when they were tried at Nottingham. Mr. Morgan Howard also brought forward a pamphlet, lately issued by Mr. Shepperley, entitled "Every Man his own Doctor," to show that defendant had changed his mode of doing business since the commencement of these proceedings. He now announces a series of medicines for various complaints, and sells each under protection of the patent medicine stamp.

Frederick Shepperley, nephew and apprentice of the defendant, corroborated his uncle's evidence.

The evidence concluded, there were one or two animated passages between the counsel, Mr. Morgan Howard urging that the case might be settled at once on the point of law. Sir Henry James cut this short by plunging at once into his concluding address to the jury, taking skilful advantage of the little dispute by protesting at the outset against the idea that a man was to be "convicted" without allowing a jury to say first whether he has committed a crime or not. Speaking with great animation and seizing every point of the case with consummate ability, Sir Henry James made a most effective speech. The prosecutors were again severely reproached for adopting such means as they had employed to get evidence, and the notion of "diagnosing, as my learned friend calls it," the case of the man with pimples on his face, was ridiculed with much humour. The previous arguments were again repeated, and Sir Henry apologised for troubling the jury with these remarks a second time, but he was very anxious that no injustice should be done.

It was now nearly 4 P.M., and the rest of the case was adjourned till next day, when Mr. Morgan Howard commenced proceedings by addressing the jury for the prosecution. Defending Mr. Death and the employment of that gentleman, Mr. Howard replied to a few other of Sir Henry James' comments, and then, by comparing the examinations to which medical men and chemists are respectively subject, argued very effectively that the evident intention of the Legislature was to keep their occupations separate. Then he urged that after all Mr. Death's evidence was quite as likely to be reliable as Mr. Shepperley's, and in any case he claimed that the "acting as an apothecary" had been conclusively proved.

In summing up, Mr. Baron Pollock remarked on the importance of the case, and urged the jury to dismiss from their minds the extreme cases which had been suggested on both sides. The question for the jury was simply whether Mr. Shepperley had acted as an apothecary in the cases on

which evidence had been given. Acting as an apothecary was judging of disease by symptoms and selecting the medicine for treating the same, and though a chemist might fairly hold conversation with his customer respecting any purchase without infringing the Act, he could not advise either in simple or serious cases without incurring the penalty. The evidence was summed up with great care and fairness, and the question put was whether the defendant had done more than "dispense and vend" drugs.

The jury consulted for a few minutes, and then intimated that they would like to retire. They were absent for a little over half-an-hour, and when they returned it was with a verdict for the defendant in both cases.

Sir Henry James said he would like to know on what ground of defence this conclusion had been arrived at, but the learned Judge said he could not inquire into that. There was a verdict for the defendant with costs, and he did not see what more need be wished.

Returning from Westminster to the City, a conversation occurred in the railway carriage between a pharmaceutical chemist and several of the jury. From what passed it appeared that at the end of the first day's trial the jury were unanimously in favour of the defendant. The Judge's summing-up caused three of their number to waver, and this occasioned their retirement, but agreement was induced by a consideration of the character of the evidence brought forward for the plaintiffs.

In the Exchequer Division of the High Court of Justice on November 7, at the sittings at Nisi Prius (before Baron Pollock and a special jury), the case of the Society of Apothecaries *v.* Shepperley was heard.

This was an action brought by the Master and Wardens of the Apothecaries' Society of the City of London against a pharmaceutical chemist residing at Nottingham. The statement of claim alleged that the defendant had upon two different occasions, without having obtained a certificate under the statute (55 Geo. III., ch. 194), acted and practised as an apothecary, and was, therefore, liable to pay two penalties of 20*l.* each. The statement of defence set up the 28th section, which was that "nothing in the Act shall prejudice or interfere in any way to affect the trade or business of chemists and druggists in buying, preparing, compounding, dispensing, and vending drugs and medicines and medicinal compounds, wholesale or retail, but all persons using or exercising the said trade or business shall and may use, exercise, and carry on the same trade or business in such a manner, and as fully and amply to all intents and purposes, as the same trade or business used to be exercised or carried on by chemists and druggists before the passing of the Act." That the defendant had only acted as a chemist and druggist acted prior to 1815, which was the year in which the Act was passed. That the defendant was, therefore, entitled to be exempted from the penalty, and that there was a custom in the trade, according to which chemists and druggists were in the habit of prescribing for simple complaints. The defendant also denied that he had been guilty of any acts which brought him under the power of the 20th section.

Mr. DAY, in opening the case on behalf of the plaintiff, explained that the action was brought in point of form by the Apothecaries Company to recover a penalty of 20*l.* from the defendant, Mr. Shepperley, who was a chemist and druggist carrying on business at Nottingham. In reality, however, the action was not brought to recover the penalty, but to test the question whether persons carrying on business as chemists and druggists were entitled to carry on their trade in such a manner in which the defendant had done, and in which he claimed a right to continue to do. The question therefore to be determined in Court then and subsequently was, whether chemists and druggists were entitled to treat for simple complaints. Beyond that there would really be no serious question for the jury to determine,

inasmuch as the remaining points in the case were more of law than of fact. The statute upon which the law rested was the 55 Geo. III., ch. 194, and the questions which were raised in the present case upon the statute had already been determined in two or three cases before different Courts. He would explain to them very shortly, in order to make the matter clear for their consideration, what the practice was before 1815, when the Act was passed. There were then three sets of persons who were connected with the dealing in drugs. First of these were the College of Physicians, who were authorised to impose a test of qualification upon those who were admitted to the College, and who were allowed to practise as physicians. They were, however, prohibited from administering drugs themselves. The physicians sometimes by word of mouth and sometimes by writing prescribed what drugs should be taken, but they did not deal in drugs or make any profit upon them. They simply said what drugs should be administered, and those drugs had to be administered after they had been supplied by the druggist. Secondly, there were the apothecaries, who were also persons licensed by a corporate body which had long been in existence, and established by more than one Royal Charter. Their powers were increased and enforced by the statute to which he had referred, and of which there were not many provisions to which he would draw their attention.

The apothecaries, however, had long existed, but they were very inferior to the physicians—he did not mean in an offensive sense—but in point of rank or social position. Probably if one might draw any inference from the use of the word apothecary, it would imply that the person kept a druggist's shop, and perhaps in some instances a grocer's shop, and sold herbs and other articles of a less medicinal character. But after a time he assumed to treat disease as the defendant had been doing, and therefore could be said to have treated for and supplied drugs. That was to say, he acted very much in the same way that the defendant had and claimed to do. The apothecary saw the patients, treated for the disease and supplied the medicine, and therefore combined the profession of a physician with the trade of a drug seller. But after a time it was found that persons prescribed medicine without having received the proper qualification. The Society of Apothecaries was, therefore, chartered by the Crown, and recognised by an Act of Parliament. Afterwards another class of men sprang up to do what the apothecaries did so far as regarded the sale of drugs, but not as regarded the practice as physicians, and took the name of chemists and druggists. That was the state of things in the year 1815, and the following mischief was then found to exist. Unqualified persons—he would not say unqualified in the sense of non-ability, for it might be that a certain person only supplying drugs would be better able to prescribe than a physician—but what he meant by unqualified was that the person had not a legal qualification—unqualified persons came forward and were accustomed to treat for diseases when they had not sufficient knowledge and experience, and it was then found necessary to impose the provisions of the statute 55 Geo. III. ch. 194. He would remind the jury that they were not called upon to consider whether it was desirable to have free trade in physic as well as in sugar or in anything else. There might be some of them, however, who would think that such persons who professed to treat in medicines should be tested, not by their success in treating the poor and the ignorant, but by some qualification imposed by a recognised body. The Legislature took that view, and, at all events, the jury were not called upon to consider whether the Legislature did right or not in acting according to that view. Every man was fully entitled to retain his own opinion, but they (the jury) must adopt the views of the Legislature whether they liked it or not. He had only now to bring the question before them, whether the spirit and letter of the statute had been infringed, and if it had been, his clients would be entitled to their verdict. Well, now, what was an apothecary? Because the Act said that no person should practise as an apothecary unless, and so forth. He had given only very briefly the history of the rise of apothecaries and of chemists and druggists, and therefore he might add the definition of an apothecary, which was found in the case of *Apothecaries' Company v. Lotinga* (2 vol. Moody & Robinson): "The sole question," said Mr. Justice Crosswell, "is whether the defendant has

practised as an apothecary, for it is not pretended that he has obtained any certificate authorising him to do so. Now I apprehend that an apothecary is a person who professes to judge of internal disease by its symptoms, and applies himself to cure that disease by medicines; and if you think the defendant has in either of the cases proved before you, acted in that way, I recommend you to find your verdict for the plaintiffs. Take the case of Ann Pall. It is said that hers was a surgical case; but can a consumption be fairly so classed? How does the medical attendant judge of it? Surely by the symptoms of the patient in regard to the internal functions of the body; and how does he apply himself to cure it? Not by normal operations externally, but by the administration of medicine internally." The learned judge, using the words "internal disease by its symptoms," clearly distinguishes the art and practice of an apothecary from that of a surgeon, because the surgeon applied himself to external diseases. That view had also been adopted by Mr. Justice Field in a very recent case, that of the Apothecaries' Society v. Wiggins, which was decided in May, 1878, and a report of which appeared in the *Pharmaceutical Journal*. Having thus shortly explained to them the meaning of the word "apothecary," it would be as well to consider a few sections in the Act to see upon which the defendant relied. Now it was clear that all apothecaries were bound to supply physicians' prescriptions. No doubt when the apothecary developed himself into a full-fledged apothecary, he drove about in his carriage and associated with the best classes of society. He then found it no doubt rather humiliating to have to supply drugs, written upon a dirty piece of paper, and handed in by a little street boy, but for all that the apothecary was bound to dispense medicines at the bidding of any physician. Now the defendant, Mr. Shepperley, said in the face of the Act that he was entitled to do exactly the same as an apothecary under such circumstances, both as regarded the dispensing of medicines and the prescribing, for he says: "I am entitled to deal with simple cases"—that was to say, what he called simple cases—and the reason he gave for that contention was because before 1815 the chemists and druggists had so acted. What did the Act say, however? The language was, "that nothing in the Act shall prejudice or interfere in any way to affect the trade or business of the chemists and druggists in buying, preparing, compounding, dispensing, and vending drugs and medicines and medicinal compounds, wholesale or retail, but all persons using or exercising the said trade or business shall and may use, exercise, and carry on the same trade or business in such a manner, and as fully and amply, to all intents and purposes, as the same trade or business used to be exercised or carried on by chemists and druggists before the passing of the Act." That section clearly enacted that the chemist and druggist after 1815 might carry on his business in the same way as he has done before so far as regarded, and there was the limit, "buying, preparing, compounding, dispensing, and vending drugs and medicines, and medicinal compounds, wholesale or retail." The Act also provided that if any person practised as an apothecary, with the exception of those who had only practised in the manner alluded to in the 28th section, and who held an apothecaries' certificate, should be liable to a penalty of 20*l.*; and that if any apprentice should assist in doing so without the necessary qualifications he would be liable to a penalty of 10*l.* But the Act said that the chemist might still buy, prepare, compound, dispense, and vend drugs as fully as he had done previously. The plaintiffs did not dispute the right of chemists to supply drugs, but what they complained of was that they should be allowed to prescribe drugs. The objects of the Legislature, according to the 5th, 20th, and 28th sections of the Act, were perfectly plain, as being to allow the chemist to carry on his business as fully as he had done before, but not to prescribe medicines for the treatment of internal disease. He would like also to say another word on the case, with reference to the claim made by the defendant to treat for simple complaints. Now he complained of the term "simple complaints," when they had come to try a question of general practice. He was prepared to show them that with reference to "simple complaints" much mischief was likely to arise. In the present case an instance was brought forward in which Mr. Shepperley professed to treat for a sore throat. A man of the name of Death came into the shop and said he had a sore

throat. Mr. Shepperley told him to open his mouth, and then Mr. Shepperley looked into it, and then Mr. Shepperley tapped him on the chest, and eventually told him he had some stuff which would do him good, and then Mr. Shepperley told him to come again and see him. It was a happy thing that the man had not a more serious complaint, but it often happened that a sore throat would be the sign for a much more serious disease under the eye of a properly qualified practitioner, who would be readily able to diagnose between various diseases in their first stages. Then, again, a man might have a very small pain in the intestines, which might lead to a very serious disease. They must remember that the present question could not be compared to one of figures, in which great exactness could be arrived at, but they were dealing with the extent of internal complaints. In fact, persons who called their complaints simple often referred to complaints which were far from simple, and led to the most serious consequence, owing to the want of proper treatment. It was true that in the present case the treatment by the defendant had not led to fatal results, because Death was in reality a person who was used by the Apothecaries Company to ascertain whether Mr. Shepperley was actually acting as an apothecary, but so far as their verdict would be concerned they had nothing to do with the question how Death was treated, except as regarded the action of the defendant himself. It was for them to say after they had heard the little evidence which would be given, whether the defendant had or had not brought himself within the letter of the statute. His lordship would direct them upon all questions of law which might arise. He had been told that they would see a chemist and druggist who practised before 1815, and that he would tell them that he prescribed for two persons who paid him. Well, he was not surprised that that should be the case. It was natural to suppose that chemists and druggists would prescribe for anyone who paid them, but then the Legislature considered such a state of things was inconvenient, and passed the Act referred to for the express purpose of putting a stop to it. He would now produce evidence as to the cases alleged against the defendant.

Mr. THOMAS JOLLY DEATH said I carry on business at No. 28 Basinghall Street, City. When the events here referred to occurred I was living at Nottingham. I was trustee of a lace business and an enquiry agent. In 1877 I went to the defendant's shop at Chapel Bar and complained of a sore throat, difficulty of breathing, tightness in the chest and sleeplessness. The defendant told me to face the light and came from behind the counter. He looked down my throat, and said, "I don't see much amiss with you." The defendant then put his hand upon my chest and said, "Yes that is the place." He gave me some medicine, and told me to come again when that was finished, and to keep from smoking. I paid the defendant a shilling, and that was all that passed. A poor man, apparently a tramp or a labourer, came into the shop while I was there.

Sir HENRY JAMES asked whether it was proposed to treat that as another case, as it was not included in the particulars.

Mr. STANGER replied on behalf of the plaintiffs that the particulars, although asked for, were never granted.

Sir HENRY JAMES remarked that as the action had only been brought in respect of the cases of Death and Hubbard, another case could not now be brought forward. The point was raised in the case of the Apothecaries' Company v. Wiggins, and decided in his favour.

Baron POLLOCK ruled that he ought to receive the evidence if it was pressed, but it did not seem fair to the defendant.

Mr. STANGER agreed not to press the matter.

The WITNESS further said: I saw Mr. Shepperley again on November 28 while I was standing at the door of his shop watching the people as they were passing in and out. I do not think that Mr. Shepperley knew me, but a neighbour told him who I was. I left and went to a refreshment room. Mr. Shepperley followed me. He said to me, "I understand you are watching me and trying to get evidence against me so as to convict me of selling drugs and prescribing. I was at first frightened about it, and when a poor woman came to me for treatment I sent her to a doctor for him to prescribe. The woman afterwards came to me and said, 'I had to pay the doctor 5*s.*, while I would only have had to pay you 1*s.*'

That is what the doctors are doing for poor people. I have now taken advice from my friends, and the matter has been discussed in the trade journals which have taken the matter up, and they have decided to fight the matter. If you fight it, the trade will. I am prescribing and will go on prescribing. I am determined to fight the matter from the lowest to the highest."

In cross-examination by Sir Henry James,

WITNESS said: I was trustee of a lace business at Nottingham, and enquiry agent in partnership with Forester. I have not acted as a detective or looked after murderers. I have been engaged in extradition cases sometimes. I have been sometimes employed to collect evidence, get criminals, and to find their whereabouts, but never to apprehend them, because I never held a warrant. I am not in the police force. I was asked by the Medical Defence Association at Nottingham to find out about a person prescribing and dispensing medicines without receiving a physician's prescription. I was instructed by the plaintiffs' solicitor how to act. He told me that I must have my pulse felt and other similar acts done to me by the chemist. This case is the only one in which I have been engaged on behalf of the plaintiffs.

Sir HENRY JAMES: When you went to the defendant's shop were you not perfectly well?

WITNESS: I thought I was in good health, but the chemists all told me that I was ill, so I began to think so, too.

Sir HENRY JAMES: What did they say was the matter with you?

WITNESS: One chemist said one thing was the matter with me and another something else.

Sir HENRY JAMES: Then you did not have a sore throat at all when you went to the defendant's shop and told that you had?

WITNESS: Yes, I had.

Sir HENRY JAMES: But you said just now that you were perfectly well.

WITNESS: Yes, but I had a slight sore throat. It was not so bad as to have caused me to go for advice. I had a slight huskiness in my throat as I have now.

Sir HENRY JAMES: Had you any tightness in your chest?

WITNESS: No. I would not like to have any.

Sir HENRY JAMES: How are you to be paid?

WITNESS: I am sometimes paid by result.

Sir HENRY JAMES: You expect to be paid, then?

WITNESS: I should hope so. I am 3*l*. actually out of pocket.

Sir HENRY JAMES: Have you any agreement as to how much you are to be paid?

WITNESS: No.

Sir HENRY JAMES: Have you received anything yet?

WITNESS: One shilling on my subpoena. Nothing more.

Sir HENRY JAMES: Will you throw your sore throat in as a consideration?

WITNESS: No.

Sir HENRY JAMES: Did you irritate your throat at all before going to the defendant?

WITNESS: I would not have been so foolish.

In answer to other questions the WITNESS also said: I am sure the defendant told me to call again. I did not ask the defendant to look at my throat. He asked me to face the light, and then looked down my throat, and said, "I don't see much amiss with you." I am quite sure the defendant used the word "prescribe" at the refreshment room. He used it three times.

Dr. H. R. HATHERLEY was then examined, and said he was a Member of the College of Surgeons. He was present in the County Court when the case was tried. He saw Hubbard there.

Mr. STANGER explained that as Hubbard was in America he was obliged to get his evidence in rather a roundabout way.

Sir HENRY JAMES said that he was going to call the defendant, who would speak as to the case of Hubbard, and if the plaintiffs afterwards wished it, they might be allowed to recall the present witness.

Mr. STANGER adopted that course, and asked the witness whether the defendant in the County Court admitted he had prescribed.

The WITNESS replied in the affirmative.

This closed the plaintiffs' case.

Sir HENRY JAMES then, opening the case on behalf of the

defendant, said it was open to him to ask his Lordship to find there was no case to go to the jury. He did not, however, propose to take that course, because the question for the Judge's determination—first, let him say so, and then give his reasons for saying it—is a very serious matter in the interests of two professions and of the public. The facts in the case indeed affect the dealings of persons in every-day life throughout this country, and the jury must, therefore, readily see how important this case must be to the persons to whom he had referred. His learned friend (Mr. Day) had put the case before them as if it was a patriotic action—as if it was brought on behalf of the public, as if it were to protect the public from ignorant people who might impose upon them by professing to have knowledge which they did not possess, and owing to which ignorance, it was urged, the public might be injured in their health, and, perhaps, even endangered in their lives. Such an occasion for bringing the action, however, only existed in the minds of those who instructed his learned friend. In reality the action was brought to hinder the sale of specific drugs by chemists in their own shop, and to prevent the chemist from bringing the slightest discretion to bear as to the sale of such drugs. If they, by their verdict, allowed an attempt to be forced upon them by the plaintiff, they would in reality shut the chemist's door against many persons who were entitled to enter his shop, and would prevent the chemist from exercising the slightest discretion in reference to his goods. It would indeed be a serious result if their verdict should be found in favour of the defendants. Now for an instance: A person may feel a headache, and ask for a tonic;—he meant a person in the ordinary condition in life. What was the chemist to do? The chemist must surely ask, "Is your headache a severe one, and from what do you suppose it arises?" Surely he must exercise some discretion in the case. They must, and they could not do otherwise, than leave to the chemist who is selling his drugs a certain amount of discretion as to the drug he sells. Take the case in which a specific article is asked for—say, for instance, a black draught. The chemist must surely look at his customer and see whether it is a strong man or a little child. He must use a discretion, therefore, as to the strength of the dose, and upon the other hand a discretion is naturally left to the chemist by the customer to make up the draught in the proportions and strength suitable to him. If the chemist did not exercise his discretion, and he said it in the presence of the learned judge, he would be guilty of manslaughter if he gave too severe a dose to a young child, and so caused its death. He would remind them, however, that these medical gentlemen in their desire so to obtain this business for themselves, for it was no longer a profession, but a business, in such a case as the present had even thought it right to use a detective policeman to simulate disease, and so endeavour by that falsehood to prevent the chemist and druggist from taking part in the trade to which he belonged. As to who was actually responsible for such an occurrence, he could not say, but the fact remained the same: a detective was hired to go into the defendant's shop and say, "I have a sore throat," when he had none; to say, "I have a tightness of the chest," when he had not. Surely it would have been as well for the plaintiffs to have waited until they had found a genuine case, in which the law had been abused and the patient injured, and then have come before the Court and asked for penalties, without concocting a case like the present. The case appeared to him to be a question partly of law and partly of fact. He had matters of fact to be left to them, which, with submission to the learned judge, must be determined by them, and he had also questions of law which he would endeavour to separate as much as possible from the rest of the case. This was a proceeding upon a penal statute. He would not support any case on the part of his client by which an evasion of the statute might be obtained. So far as he could judge it was a wise statute, but was not so much for the protection of the apothecaries as for that of the general public. If it were otherwise it would be unbecoming in him to urge that the effect of the statute should not be carried out, but being a penal statute he had a right to say that the offence must be distinctly proved. Therefore, before the defendant could be convicted of having broken the statute they must be satisfied that he had infringed the provisions which the Legislature had enacted. Let them see

whether that had been the case, when they had had an opportunity of hearing the evidence which would be given by his client. He would submit that according to Sec. 20 his client could not pay the penalty, inasmuch as he had not acted as an apothecary. But then if they should find the defendant had acted as an apothecary he would still submit that he was not liable to the fine inasmuch as he had acted only as a chemist and druggist had done prior to 1815, and was therefore entitled to the exemption observed under Section 28. He would call witnesses before them who would speak as to the custom in 1815. Sixty-three years had elapsed, and of course it was difficult to obtain evidence upon such a subject. The actions would probably become more and more frequent as time went on and as evidence grew more and more difficult to obtain. He had, however, some elderly gentlemen—they must of course be elderly—who would speak as to the custom of 1815, and show that the defendant had by no means exceeded the mode of dealing among chemists and druggists at that time.

Baron POLLOCK intimated that he considered the description in which chemists and druggists were recognised as having traded, according to Section 28, was confined to the words "buying, preparing, compounding, dispensing, and vending drugs, &c."

Sir HENRY JAMES said that was a very important point, but he would submit that if he could show that before the Act was passed chemists and druggists were accustomed to hear about the complaints of patients, and then dispense drugs accordingly, he would be entitled to claim the same right for the defendant. He would at all events contend that with the word "dispense" the right to exercise a discretion was intended. Referring again to the question whether the defendant had practised as an apothecary, he would remind them that a person practising as such went to the houses of patients, and there prescribed for their complaints, charging afterwards only for the attendance and advice.

Baron POLLOCK said he had seen bills of apothecaries in the olden time, in which the drugs or goods were specifically charged for; but that would not probably be very material in the present case.

Sir HENRY JAMES said he meant rather to say that the apothecary was able to recover at law charges for attendance and advice. The chemist and druggist, however, was not able to do so, and could only recover in respect of goods or drugs actually sold. His client had carried on business at Nottingham for a considerable time, and not one real act of irregularity had been held out against him on the present occasion. Had he been holding himself out to be an apothecary? No; he had only been professing to deal as a pharmaceutical chemist and druggist, selling his goods fairly and honestly. Notwithstanding the feigned diseases of Mr. Death, the plaintiff had not succeeded in bringing one case against his client. They had actually had to enlist a man to go into the defendant's shop and make false statements, and so endeavour to obtain an accusation under false pretences. They had advised the man to go to the defendant and ask to have his pulse felt, and to be prescribed for tightness of the chest from which he did not suffer. He supposed they acted on the principle of "Do evil that good may come." That was the way in which the plaintiffs had endeavoured to trap his client, but he submitted to the Court and the jury that no case had been made out against him. Notwithstanding all the schemes against the defendant, he did not think they would do him much harm, although it was so intended. He hoped, however, that the medicine did Mr. Death some good, which would be that it should have no effect upon him at all. He would venture again to remind them of the serious nature of the action, inasmuch as the result would decide whether or not the chemist and druggist should exercise a discretion in the sale of his drugs. He would now proceed to call evidence in support of his case, and in doing so he would remind them that if there should be any confliction between the evidence of Mr. Death and his client, that they should give the benefit of the doubt to the defendant, inasmuch as he had hitherto acted fairly and honestly, while Death had been hired to tell a falsehood.

Mr. FRANCIS CURRISS was then called to give evidence on behalf of the defendant. He said he resided at Diss, in Norfolk, and was 80 years of age. In May, 1814, he went to Mr. Woolrych, at Uttoxeter, to whom he was bound for four years. He afterwards went to Litchfield as an assistant to

the son of his former master. He stayed there for about a year, and then came to London. He lived at Uxbridge for a short time, and in 1823 went to enter upon business on his own account in Diss. He continued in that business for 51 years, only having left it on December 31, 1874.

Mr. MORGAN HOWARD said he would object to any evidence of custom being raised subsequent to 1815.

Sir HENRY JAMES submitted that although the evidence of custom subsequent to 1815 would not be such strong proof of custom prior to 1815, as evidence given of custom prior to that date, yet it should have some weight.

Baron POLLOCK said he was not in favour of such evidence being given.

The WITNESS then, in further evidence, said that when he was with Mr. Woolrych, in 1814, his master used to dispense and sell medicines, making them up, and giving them to his customers with certain instructions, taking care that there was nothing which was injurious to the customer. He made inquiries of the customer, if he thought it necessary to do so, in order to give what was proper for the complaint. If a customer complained of a cold, his master would ask where the cold was, whether in his nose or in the bronchial tubes; but for such cases he would not look down his throat. He would feel a person's pulse or look into his throat if asked to do so. In the case of pimples in the face his master would look at the pimples and prescribe accordingly. He would sometimes look at the tongue and feel the pulse of a customer. The chemist used only to be paid for the medicine and not for the advice. If a customer came to the chemist with a dangerous complaint, he (the chemist) would tell the customer to go to a doctor.

Cross-examined by Mr. Morgan Howard.

WITNESS: In 1814 I was 16 years of age, and was then at Uttoxeter. My master kept an open shop, and I acted as his apprentice. I do not pretend to be an apothecary, and I have no qualification as a physician. But I attended the lectures of Dr. Harrison on *Materia Medica*, and of Brodie, Bell, and Abernethy, on *Anatomy*. When I went into business. I felt myself then capable of doing what I did, even to treating acute inflammation of the lungs. In 1814 persons were in the habit of coming into the shop and being prescribed for over the counter. I made myself acquainted with the provisions of the Act when it was passed in 1815.

Mr. HOWARD: Was your idea of the Act that you might examine a case so long as you did it within the four corners of the shop?

Sir HENRY JAMES objected to the question.

Baron POLLOCK said the guiding point was what was done before 1815.

WITNESS: I am in a position to say that up to 1814 my master was in the habit of examining a case and dispensing for it in the shop. In my judgment that was dispensing medicine, and we considered ourselves within the Act so long as we did not go out visiting.

By Sir HENRY JAMES: I do not remember individual cases in 1814, but I am certain the course I have indicated was pursued by my master then.

Mr. GEORGE PARSONS, examined by Sir H. James: I live near Loughborough, in Leicestershire, and am 85 years of age. In 1809 I was apprenticed at Worcester, of which city I am a freeman. I settled eventually in Leicester, where I remained as a chemist and druggist until 1862. My masters at Worcester, Messrs. Blews, treated and prescribed for persons in the shop if required. The patient coming into the shop would explain the nature of the case so far as he was able, and the chemist would prescribe the medicine. If it were a serious case it would be put into the hands of the head of the firm. When the chemist gave the medicine he charged for it alone—not for the advice. The proper directions as to doses would be given. I left business in 1862. My memory as to what took place up to 1815 is perfect. The course which my master pursued during my apprenticeship was the same as was adopted by other chemists.

Cross-examined by Mr. M. Howard.

WITNESS: The head of my masters' firm had practised as a medical man. Before 1815 no diploma was required. I confined my practice to the shop. The people who came for medicine were chiefly of the lower class. Chemists and druggists are better educated now than they were forty years ago.

Mr. GEORGE GODDEN, examined by Mr. Higgins: I live at Plumstead, and am 83 years of age. In 1812 I was apprenticed with Mr. Phillipson, chemist, of Chichester.

A juror interposed and said he thought the practice before 1815 had been completely established.

The witness was then withdrawn.

Mr. SHEPPERLEY, examined by Sir H. James: I am a pharmaceutical chemist in Nottingham. For nine and a half years I was dispenser of medicine to the Nottingham General Hospital. I make up physicians' prescriptions at the rate of some thousands a year. In addition I sell specific articles.

Sir HENRY JAMES: Articles that are not medicines sometimes?

WITNESS: Yes.

Sir HENRY JAMES: Such as acidulated drops, for instance?

WITNESS: Yes.

Baron POLLOCK: And tooth brushes, perhaps?

WITNESS: Yes.

Sir HENRY JAMES: What happened when Death, the informer, came into your shop?

WITNESS: He came and said he had a sore throat. I looked into his mouth, but saw nothing the matter with his throat. He asked me for some medicine, and I said perhaps some saline mixture would answer his purpose. I charged 1s. for the medicine, but nothing for advice. I did not tell the man to come again if he did not get better. I was not likely to say that, after telling him there was nothing the matter with him.

Baron POLLOCK: That does not always follow.

WITNESS: I believe Hubbard was an employé of Death's. He came into the shop, and asked for something for the pimples on his face. After a conversation I told him that I did not give advice. He said he had been taking medicine before, and wanted the same kind of thing again. I gave him a mixture, for which I charged him 1s., but I charged nothing for advice. I do not attend patients, nor charge for advice, nor prescribe for a serious case. I only endeavour to ascertain the purpose for which drugs are required. I saw Death afterwards, and he then denied that he had been watching my premises, but said that I had prescribed for him. He attempted to define the law, but I said that was all rubbish. I did not say I had prescribed, and should prescribe.

Cross-examined by Mr. Howard.

WITNESS: I have no medical qualification. I have been in business on my own account for ten years. What I have described I consider to be counter practice. I now sell patent medicines. When examined in the County Court I had no doubt that I had looked at Death's throat. I did look at his throat.

Mr. HOWARD: You examined it?

WITNESS: I looked at it.

Mr. HOWARD: Medically?

Sir H. JAMES objected.

Baron POLLOCK: He can tell us whether he looked down the throat legally or medically.

WITNESS: I looked to see if he had a sore throat, and I told him I saw nothing the matter.

Mr. HOWARD: And you prescribed for him accordingly?

WITNESS: I gave him something similar to what I thought from his description he had had before. I did not tap him on the chest, nor ask him questions about his lungs. When Hubbard came I looked at his face and saw the pimples. I gave him medicine.

Mr. HOWARD: With a view to treatment?

WITNESS: I have told you the circumstances under which I gave him the medicine. I gave it to him for the purpose of taking for pimples. I did not form any opinion as to what had produced the pimples.

Mr. HOWARD: Why did you not?

WITNESS: I cannot say. I had already had the detectives. I considered myself competent to form an opinion. I supposed the pimples had been caused more or less by an impure state of the blood. I have a better recollection of Hubbard's case now than I had in the County Court.

In re-examination by Sir Henry James,

The DEFENDANT said: I would put on the bottle of mixture or box of pills the quantity and time of the dose. It is usual to do so.

Baron POLLOCK: I suppose you saw the pimples on Hubbard's face distinctly?

The DEFENDANT: Yes; and therefore I had no need to make any inquiries. I only charged him the price of the pills.

Baron POLLOCK: Did you tell Death to leave off smoking?

The DEFENDANT: No, not a word.

Baron POLLOCK: Did you tell him he was in the habit of smoking?

The DEFENDANT: No, not a word.

FREDERICK SHEPPERLEY was then called, and said he was apprenticed to his uncle. He remembered Death coming into the shop. He was close to Mr. Shepperley, behind the counter. There was nothing said about the tightness in the chest or about smoking. Death leant over the counter, and said to his uncle, "Will you look down my throat. It catches me here." His uncle then looked down the man's throat, and said, "There is nothing the matter with it." Having done that, his uncle gave Death the medicine, saying that possibly a saline draught would answer the purpose. His uncle did not tell Death to call again.

Mr. MORGAN HOWARD, at the conclusion of the evidence, submitted to the Court that no question of fact had been raised, but that there was only a question of law as to whether the defendant had acted as an apothecary within the meaning of the statute.

Sir HENRY JAMES objected to his learned friend, at that stage of the proceedings, interrupting the trial and telling the Judge how the verdict should be given. Such a procedure was altogether unconstitutional. He submitted on behalf of defendant that the plaintiff had no case.

The learned counsel on both sides then summed up the case to the jury on behalf of their respective clients, reiterating the arguments already set out and commenting upon the evidence which had been given.

Baron POLLOCK, in summing up the case to the jury, said: We have now come to the conclusion, so far as the evidence and the observations by counsel are concerned, of a case which is certainly one of a very important character—important not so much in consequence of the penalty which it is sought to recover from the defendant, that penalty being small in amount, but in consequence of the fact which is obvious upon the face of it, that this is a test action. It is a test action on the part of the Apothecaries' Society, brought for the purpose of ascertaining so far as they could the opinion of the Court and of the Jury upon a question which is in itself of considerable importance to the medical profession and to the public at large. Inasmuch as the decisions and verdicts of juries from time to time have had, and always ought to have, a considerable effect when they are disseminated over the country, and even in the case of matters which are partly dependent upon questions of law, it becomes an important question. On that account I thought it was desirable that the Court should not at the close of the previous day proceed to take a verdict which might possibly be open to observations hereafter, and certainly would have been canvassed—I do not mean in public—but by becoming very likely matter for discussion in the Court above. The action is brought nominally by the Apothecaries' Company to recover from Mr. Shepperley, the defendant, two penalties in respect of two cases—those of Thomas Jolly Death and Samuel Hubbard—in which it was said that the defendant had infringed the law as laid down by the Apothecaries' Act of 1815. Of course it would be open to them to consider both these cases, inasmuch as in each case the penalty was separable. If the defendant did infringe the law in both cases he would be liable in both; if he did not infringe the law in either, then he would be liable in neither; and if he infringed the law in one case and not in the other, he would be liable in the one and not in the other. The law upon the subject was not new. It was a law passed so far back as the year 1815. Therefore, it was a law which was not only at that time considered as passed and having effect, but as one which had governed the transactions and conduct of men, so far as concerned this particular subject, ever since; and so governing as a matter of considerable importance to the profession and to the public, it is as well to see clearly what is really the intention of this Act of Parliament. It is hardly necessary to say that in looking at the Act of Parliament, and acting upon it, the Court must be guided

by what are the terms of the Act, and not by what some might think ought to be its terms, or by what some might think to be the better course in regulating these matters. It was a very old maxim, founded on good sense and on constitutional law, that "no man should be wiser than the law." It would not become the jury or the Judge in this case to go beyond the real intention and meaning of this Act, as expressed by words of the Act itself, in order to carry out any view in which they might wish to go beyond the question at issue. We have all, I suppose, had occasion to see the great kindness, attention, and unselfish care which is bestowed, not only by the medical profession, but also by chemists and druggists, on the poor when they need their assistance. There are few of us, I suppose, who have not upon some occasion had need to resort, in cases of emergency, to the same sources of assistance; and I am sure we have never found them unwilling to give their assistance when it was needed. But that, of course, is not the question here, nor the foundation upon which the Court could decide the question. Again, I would remind you that nothing is more dangerous in a matter of this kind than to be governed by extreme cases. Extreme cases might be put forward upon one side or upon the other. It might be said, What is a man to do in the case of extreme danger or in the case of an accident in the street when life was imperilled? Is no man to put forward the knowledge he possesses for the saving of life or the mitigation of illness in such a case? That, of course, is an observation which may be made, not only with regard to apothecaries or chemists, but with regard to every one of ourselves who might be present upon the occasion and happened to have any knowledge of the treatment which might be required. On the other hand, the Court has heard how undesirable it is to put into the hands of uneducated or partially educated men that which it was intended should only be done by persons of the highest education, and who have received proper diplomas for the purpose. It would be extremely unwise, therefore, for you to allow extreme cases to weigh on your minds one way or the other when you have the plain words of the Act of Parliament to deal with. The section under which the penalty now sought to be recovered is this:—"If any person shall after the first day of August, 1815, act or practise as an apothecary without having obtained a certificate under the Act, he shall for every offence forfeit and pay a penalty of 20*l*." Therefore, the question is—Did the defendant upon either of the two occasions referred to "act or practise as an apothecary"? A difficulty arises, however, in saying what is "acting and practising as an apothecary." Now, although observations have been made by learned counsel in this case as to what learned judges have said from time to time with regard to the proper definition of an apothecary, it is no part of my duty, nor of the duty of any learned judge, to define who is an apothecary. It is not a word of legal art, but is a word of common use—a word in the English language, to be understood and appreciated, and to have a meaning attributed to it, by the world at large. In this particular case my duty is to apply the law as we find it. I pay great deference to what has been said by learned judges who have preceded me upon the subject, and especially to so distinguished a judge as Mr. Justice Cresswell, who said that an apothecary was a person who professed to judge of internal disease by its symptoms, and who tried to cure that disease by medicine. Mr. Justice Cresswell, I presume, did not mean "internal" as opposed to "external" diseases in the sense of a man having an eruption produced by some diseased condition of the body. That, of course, would not be any less an internal disease, and if one proceeded to judge of it by the symptoms, and apply medicine for its cure, the law would equally apply as it would to a man who attempted to cure a persistent condition of indigestion, a diseased condition of lungs, or any of the other evils to which flesh was heir, and which affected mankind internally. Happily, however, in this case the Court was not without assistance as to what was an apothecary, because there could be no rule of construction so healthy or useful with regard to Acts of Parliament—as with respect to all other documents—as to see when you are looking at a word used in one part of the statute how it stands in regard to other words of a cognate character employed in the same statute. This Act, passed in 1815, assumed the existence of persons

who were apothecaries, and stated in the plainest language what was the duty of an apothecary as distinguished from a chemist. The Act was passed in consequence of what was said to be a deficiency in the clauses of a charter granted so far back as the reign of James I. to the Company of Apothecaries. It created a system by which apothecaries were to be examined and certificates given them, and it also dealt with different duties which the Legislature assumed had been carried out before, and which the Legislature put upon them with regard to their conduct under the Act. For instance, the fifth clause said:—"Whereas it is the duty of every person using and exercising the art and mystery of an apothecary to prepare with exactness and dispense" such medicines as may be prescribed for the sick by any physician lawfully licensed for the practice of physic. It was, therefore, the duty of an apothecary before the passing of the Act to "prepare" and "dispense" in cases where the physician had given written prescriptions. So, in that case, the apothecary would be merely following up what was ordered by a physician, doing merely what was done by a chemist and druggist. But it was also clear that the apothecary did more. He not only prepared these medicines when prescribed by others, but he saw patients and judged of their symptoms, and, acting upon that judgment, gave them medicines themselves without any written prescriptions. The same kind of assistance was to be gained by reference to other sections of the Act. For instance, Section 14 said that no apothecary was to practise without having first undergone an examination. There was to be a Court of Examiners appointed, and they were to be authorised to examine all persons seeking to be apothecaries for the purpose of ascertaining their skill and ability. In what? Not in the mere compounding of medicines, but in "the science and practice of medicine." This shows, therefore, that the apothecary was a person who was to be skilled in the science and practice of medicine according to the opinion of these examiners. It clearly shows that the apothecary is a different person from the chemist and druggist. Then there is also Section 20 of the Act, as to the penalty attaching to practising as an apothecary without having undergone examination and received the required certificate of the Apothecaries' Society, and lest it should be supposed that this was putting a penalty on chemists and druggists for doing what they had properly been doing before, it was provided in Section 28 that "nothing in this Act shall prejudice or interfere in any way to affect the trade or business of a chemist and druggist in buying, preparing, compounding, dispensing, and vending drugs and medicines and medicinal compounds, wholesale or retail. But all persons using or exercising the said trade or business shall and may use, exercise, and carry on the same trade or business in such a manner, and as fully and amply to all intents and purposes, as the same trade or business used to be exercised or carried on by chemists and druggists before the passing of the Act." That meant to say that the trade or business of a chemist and druggist was included in the acts of "buying, preparing, compounding, dispensing, and vending drugs and medicines." If, then, it has been proved during the trial that chemists and druggists before the Act of 1815 had acted as physicians, the obvious conclusion would be that they had done so illegally. The fact that they had so acted could in no way assist those who sought to do it now. Such actions would be illegal, being contrary to the statute and to the spirit of the exemption provided in their favour in the 28th section. That being so, let us now see what are the facts in this particular case, and to what extent there are grounds upon which it is sought, in either of the two cases, to make the defendant chargeable for what has been done. And now what is the effect of what has been done in reference to the statute? With regard to some observations which were made by one of the learned counsel that this is a penal statute, I can only say for myself that I can make no distinction between the law passed for one purpose or for another, if in both cases a fine is inflicted. So far as the consideration of the statute is concerned, whether it is a mere remedial Act of a very light character or an Act which makes the Court to sentence a man to very serious punishment, the same rule must be observed. With regard to the language used in the statute I cannot at all assist you, nor can I say what is the proper value of that language which is

used, so far as it refers to complaints as being either of a serious or of a simple nature. Who is to tell what is a simple complaint and what a serious one? There may be symptoms which, to a skilled mind, will often show that death is painted upon the man's face; and again there are some symptoms in which the merest touch will reveal to a properly skilled and practical medical attendant that the symptoms are of a most alarming and serious character. Upon the other hand there may be symptoms which appear to be alarming and very serious, and yet often we know that the patient who is distressed by them may be only conjuring up in his mind the greatest forebodings, which really sometimes proceed from a nervous imagination. It would, therefore, be of very little value in distinguishing whether a man is labouring under serious disease or not. At all events I cannot deal with such a distinction, as there is nothing about serious or simple disease in the Act. The question is, Did the defendant act as an apothecary? and with respect to that I have already given you what assistance I can. But now comes the question, What is the evidence upon which it is said that the defendant acted as an apothecary? In dealing with that part of the case it is necessary to observe that there is some conflict of evidence in this case, as between the account given by Mr. Death, the principal witness on the part of the plaintiffs, and that given by the defendant, and it is for you to apply your minds carefully, so as to say what you believe are the real facts of the case. It may be that from memory having faded, or from a little feeling upon one side or the other, there has been a little aberration from the actual truth, but I do not think it would be fair to assume that there has been any absolute intention to mislead on the one side or on the other. Still motives of mind and notions in a person's head can in course of time influence him in giving his evidence upon a subsequent occasion. I would only make one other remark in respect of the evidence, and that is as to what has been said on both sides with regard to the actions of a man selling medicine through in some way or another expressing an opinion with regard to the medicine, or to the mode in which it should be taken. I would, therefore, suggest that it might very well be that conversations might take place, and that opinions might be expressed with regard to the medicine. What is then said to be the duty of an apothecary? It must be to form an opinion on the case, and advise and give medicine and treatment in consequence of that opinion. There may be such a case as this: A poor man, or even an educated man, may go into the chemist's shop, and say, "I want some pills." The chemist replies, "This is a well-known remedy; take this box of pills." That could not be said to be an infringement of the Act; but the thing might go further. The man might say—"I will take six of these pills when I go to bed." The chemist will say—"No, you should not take six; if you look at the box you will find that only one or two are to be taken." Or, if there is nothing on the box, the man might say—"Is it a strong medicine?" and the chemist would answer accordingly. Then a conversation might take place of this kind, as to the medicine relating to the purpose for which the medicine was to be taken, which still would be very far from bringing a man within the scope and intention of the Act of Parliament itself, which was passed to prevent people from prescribing on the basis of what they themselves discovered to be possibly the matter with the patient, unless they had received the necessary certificate after passing the required examination. We may put aside all opinion of that kind as not giving us any real assistance. Let us see, therefore, what are the facts in this case, and ask yourselves this first question—What are the real facts? and then, having found what they are, say whether these facts bring the defendant in either of the two cases within the intention and meaning of the statute.

His Lordship then proceeded to read the evidence, but in dealing with that of Thomas Jolly Death his Lordship added: I wish to point out that it makes no difference in this case whether the defendant charged for his advice or not. The question is, Whether in doing what he did in the treatment of diseases, either simple or serious, he was acting as an apothecary? It is for you to say whether the defendant had merely compounded, dispensed, and sold medicine as a chemist was permitted to do prior to 1815, or whether he has acted as an apothecary within the definition

which you think is properly applicable to that word. You must also call to mind the evidence of Mr. Cupiss and others, who stated what the custom of the trade was prior to 1815, and with which evidence you seemed to be perfectly satisfied, and you must then ask yourselves whether the defendant, in his "buying, preparing, compounding, dispensing, and vending drugs and medicine and medicinal compounds wholesale or retail," had placed himself fairly within the exception of the 28th section.

His Lordship, having read the evidence, said: I shall now only ask you two questions—(1) Whether you think that in either one or other, or both, of these two cases the defendant has acted as an apothecary within the meaning of the statute? and (2) Whether he has only acted as a chemist and druggist prior to 1815 within the meaning of the 28th section? The law must be obeyed, and you must therefore give your verdict either for the plaintiffs or defendant, as you may consider yourselves bound to do according to the facts in the case.

The jury, after having retired for a short time, gave a verdict for the defendant.

Judgment was entered accordingly.

THE PUBLIC AND COUNTER PRACTICE.

AN article in the *Daily Telegraph* of the 11th inst. indicates the view which the public will take of the action of the Apothecaries' Society in attempting to put down the counter practice of chemists and druggists. Our daily contemporary, after narrating the circumstances under which the trial was brought, declares "that the present decision seems to us based on public convenience and common sense. In the first place, if Mr. Shepperley has violated the law he has erred in company with perhaps every chemist in the United Kingdom. Hardly an hour of the day passes without a customer entering to complain of some common ailment or accident—a cough, a cut finger, a scald, a cold—and asking for some known and approved remedy. Still more frequent are the appeals of the poor for relief to their children suffering from a customary infantile illness. To put all this down by the strong arm of the law would inflict on the masses of the people considerable hardship. The head of even a middle-class family hesitates to call in a general practitioner whose bill at Christmas may be swollen by visits sometimes repeated beyond the necessity of the case; and how much more do the needy shrink from incurring such expense! They know as a matter of fact that both as regards themselves and their children there are ailments that simply require a little medicine promptly given; and, instead of summoning the doctor, or calling at his house on the chance of seeing him, they enter the next chemist's shop, and for a few pence obtain at once the means of cure. Recourse to a doctor in such cases, means not only loss of money, but loss of time—in a double sense. The professional man may not be at home or cannot come immediately when called; while the chemist is always behind his counter. In addition a working man cannot give up half a day waiting at his own house or in the doctor's ante-room, while he can easily call at a shop on his way to or from work. A still more important consideration is involved. If we prohibit the chemist from seeing customers and selecting medicine for them, we shut off from the poor cheap and ready medical assistance, and thus force upon them one of two alternatives—expensive treatment or neglect. The latter will probably be preferred, and thus many a slight indisposition will grow uncared for into a grave illness, causing heavy loss and requiring in the long run first-rate medical advice. We often see this result amongst the poorer middle class. No people so severely suffer from want of medical aid as those whom we may call the 'genteel poor.' They do not belong, like artisans, to sick clubs; they shrink from contact with the crowds who besiege the doors of the great hospitals; they are ashamed to visit a physician at the hours he devotes to gratuitous advice. If they have 'seen better days' they remember bitterly when they need not have had recourse to these devices of the necessitous. They cannot command the guinea fee for the regular physician, and they anticipate with dread

the bill of the general practitioner, who, if once called in to a chronic case, may come day after day, adding each time to their obligations. Consequently, there is amongst these classes almost as great a need for the cheap and ready help of the chemist as amongst artisans. Nor is it any wonder that they prefer his aid and advice. He is their neighbour, and he probably knows, or soon learns, all about them. He can—remembering the rheumatism last year, or the child's cough in the winter—drop a word of warning that strikes home. Besides, he is easily visited and easily seen. There is another advantage in the chemist's shop. A working man, with his limited income, may not be able to afford a regular fee for advice, and yet may be ashamed to class himself with the gratuitous patients of the hospital, or the out-door paupers who call in the parish doctor. The chemist supplies a middle way, for, though he does not charge much, his patients are not humiliated or pauperised by consulting him, as they pay full price for what they have. Are we, by prohibiting his useful services, to divide all sick people into two classes—those who, at the hospitals or 'on the parish,' pay nothing, and those who must call in and fee a medical man? Such a course seems to us injudicious, since it would impose on the needy heavy burdens, tempt them to neglect the first symptoms of illness, or force them down into the ranks of those who rely on charity for medical advice.

"It is curious enough that the struggle now made by chemists to retain the right to attend to trivial cases was once carried on by the apothecaries themselves. Nearly 200 years ago an action closely resembling that just decided before Baron Pollock was tried in London, only on that occasion the defendant was an apothecary, prosecuted by the physicians, because he had dared to give medical advice. Upon the present occasion the defendant is a chemist prosecuted by the apothecaries for similar assertion of right. Yet the origin of apothecaries, as the statute book shows, was that in the olden time they supplemented the work of the regular surgeons, and fulfilled the humble functions now discharged by the chemist. For this they were harassed by the regular practitioners of the day. In the preamble of an Act passed in the reign of Henry VIII., it is said of the surgeons of London that they have 'sued, troubled, and vexed divers honest persons whom God has endued with the knowledge of the nature, kind, and operation of certain herbs, roots, and waters, and the using and ministering of them to such as had been pained with customable diseases'—words that curiously fit the recent action of the Society of Apothecaries against the chemists and druggists. The Act goes on to declare that it shall be lawful for such persons to 'practise, use, and minister' their skill and drugs 'according to their cunning, experience, and knowledge.' It was not, however, until 1703 that the legal right of the apothecaries to give medical advice—or rather to act on their own medical examination—was fully recognised by law. The statute of 1858 further raised them, and many as general practitioners have left the old name and status long behind. Now, having gone up the ladder themselves, it would seem that they desire to throw it down, lest the chemist and druggist should follow in their steps. It certainly is not for the interest of the public that this should be accomplished. We cannot be too severe on unqualified medical men or quacks who trade on the ignorance and fears of nervous people. But there never can be any danger in the humble work of the chemist, judging for himself the right remedy for slight symptoms or common complaints. He is, in the nature of things, shut out from serious practice. No man or woman really ill could or would come out of doors to be treated. The natural tendency of every chemist is to send any case of advanced illness to the regular doctor, for he loses nothing by it, because the medicines to be taken will, as a rule, be obtained at his own shop. If, however, we compelled him to do this in all cases, we should simply deprive the people of the services of one who, through his varied and extended experience, is sometimes well able to know the character of the illness presented to his observation. Medicine is a great science, and surgery is a great art; but they are not all science and not all art. There is much that is obscure and much that is incalculable and uncertain about both. The best practitioners acknowledge that nature often puzzles them by recoveries and battles them when they expect a cure. Experience here

comes in to supplement scientific inference; and a chemist like Mr. Shepperley, who makes up thousands of prescriptions in a year, sees scores of customers daily, and hears of hundreds of cases, must inevitably acquire a large amount of useful knowledge relative to the healing art. He may not have the science or the skill to treat a difficult or grave disease, but he must be wonderfully unobservant or abnormally dull if he cannot detect and deal with early symptoms or slight ailments as well as any physician. Then, if the attack passes into something serious, is it not a distinct advantage for the doctor to be able to refer to a person who knows something of the case, much of the patient's constitution and antecedents, and who understands the nature of the drugs to be used? In this new fight for medical liberty we sincerely hope that the chemists will finally be as successful against the apothecaries as the apothecaries were against the physicians in 1703."

The *Standard* of the same date also had an article on the trial as follows:—

The Society of Apothecaries has had a history of litigation, and the action which has just been tried before Mr. Baron Pollock and a special jury at Westminster presented only another phase of an ancient struggle. To define an apothecary would not seem difficult, but the present legal meaning which the inquirer finds attributed to the term will hardly help him, the word being simply used to denote a Licentiate of the Society of Apothecaries. The celebrated definition of an archdeacon as a person who discharges archidiaconal functions appears at first sight scarcely more disappointing; but the history of the Apothecaries' Society itself throws more light upon the subject. Before the reign of Henry VIII., when the first attempt was made at dividing the medical profession into the distinct classes of physicians and surgeons, the title of apothecary seems to have been a general term used to denote any kind of medical practitioner. As the word itself means nothing but a storekeeper it is plain that this extended application of it must have arisen from the fact that those who kept and sold drugs were in the habit of advising purchasers as to their use, and this is exactly the privilege which has been successfully asserted by the Society of Apothecaries up to the present day. There is on record a grant by Edward III. of a pension of 6*d.* a day to one Gaugeland, an apothecary, for past attendance on the King, so that it is certain that the right claimed by apothecaries to do something more than merely sell their drugs is very ancient indeed. There must, however, have been considerable confusion as to their qualifications, inasmuch as there is no doubt that drugs were generally sold three centuries or so ago by grocers, and, in the year 1606, James I. actually granted a charter which incorporated grocers and apothecaries together in one society. Eleven years later, in 1617, the discontent which resulted from this arrangement resulted in the same King granting a separate charter for the Society of Apothecaries, and it is by this charter, except where modified by comparatively modern statutes, that the rights and privileges of the present society are governed. There can be little doubt, both from the words of the charter and from collateral evidence, that the society so formed was at first regarded as a trading society alone, differing only in the nature of their merchandise from the grocers, from whom they had been so lately severed. It was probably not until the latter part of the seventeenth century that apothecaries began habitually to advise purchasers as to the drugs which they sold; and early in the eighteenth century the legality of such a practice was brought before the notice of the Judges. One Rose, an apothecary, was then sued by the College of Physicians for unlawfully prescribing for his customers, to whom he had supplied certain "boluses" or pills not specifically demanded by them, and though the Courts of First Instance decided against him, the House of Lords reversed the previous judgments, and held that the nature of his business as an apothecary justified his conduct. It is quite possible that this action was in reality, though not in name, a contest between the Apothecaries' Society and the College of Physicians, as the resources of a village practitioner would hardly at that age have allowed of an appeal to the Supreme tribunal. At all events, the right of an apothecary to prescribe for his customers has from that time never been questioned, and the efforts of the Apothecaries' Society have simply been directed to the pre-

vention of any encroachment upon their exclusive privilege. The charter of 1617, which has already been referred to, imposed a penalty of five pounds a month upon any person who should practise as an apothecary without having served an apprenticeship of seven years, and passed a proper examination. In 1815 an Act was passed to amend the charter, by which the penalty for a first offence was fixed at 20*l.*, and the certificate of a Board of Examiners appointed by the Society substituted for the previous requirements as to apprenticeship and examination. It is under this Act that the Society of Apothecaries brought their action against Mr. Shepperley, the defendant in whose favour a Middlesex special jury have just given their verdict.

The cases in which Mr. Shepperley was alleged to have infringed the statute, and trespassed upon the privileges of the Society of Apothecaries, were two. It was said, and the plaintiffs endeavoured to prove, that in two instances, at least, the defendant, while carrying on the business of a chemist and druggist, had, at the request of his customers, given medical advice and supplied certain drugs from his own prescription as a remedy. The defendant denied these allegations, and further attempted to establish a sort of custom in the trade, recognised and followed before the date of the statute sued on, for chemists and druggists to give their advice as to simple complaints. The Act of 1815 contained a saving clause as to persons who had carried on the trade of an apothecary before 1815, and it was sought to extend this provision by the contention that chemists and druggists had prescribed for simple complaints before 1815, and that they could do now what they had done then. It was, however, clearly pointed out by the learned Judge that no distinction between simple and serious complaints was made by the Act itself, and that the sole question for the Jury was whether or not the defendant had infringed the Act by practising as an apothecary. The Jury found that he had not; but the weakness of the evidence adduced for the plaintiffs should be carefully considered by those who stand in the same position as Mr. Shepperley. In one only of the two alleged cases of infringement was the person called for whom Mr. Shepperley was said to have prescribed, and that witness, according to the defendant's statement, had not only endeavoured to entrap Mr. Shepperley into prescribing for him, by complaining of a sore throat, and begging him to look at it, but had been absolutely employed by the agents of the Apothecaries' Society for the purpose of obtaining a conviction. Chemists and druggists would be rash in the extreme if they concluded from such a verdict that they might prescribe, either for sore throats or any other complaint, with impunity; or that a jury would refuse to recognise an infringement of the Act if satisfactory evidence to that effect were adduced. There can, indeed, be little question that the spirit as well as the letter of the Act is violated every day; and in London more, perhaps, than in other places. Medical advice is expensive if obtained in the regular way, and carries with it a consciousness of something like degradation if accepted gratuitously. The chemist is always in his shop, and it is difficult for the less highly educated to avoid the belief that he understands the properties of the drugs with the handling of which he is so familiar. On the other hand the chemist finds that, if he wishes to extend his trade, he must not make the purchase of drugs too expensive a proceeding. If his customers are driven to the licensed medical practitioners, registered generally as surgeons and apothecaries, they will not only pay for the advice they get, but they will probably have their drugs made up at the surgery of the medical practitioner whom they consult. He cannot in reason refuse to answer all his customer's questions; and the very fact that he sells patent medicines for specific complaints compels him to give some information which the Act, if strictly construed, would condemn. Nor would he be justified in supplying a poisonous draught to a child, for example, merely because the order for it was in the form of a prescription, subscribed with initials which might or might not represent the signature of a physician, but of which he knew nothing.

The ideal remedy for such a state of things is, no doubt, too ideal to be realised at present. No persons should supply drugs by retail, or make up physicians' prescriptions, who are not competent, as apothecaries are presumed to be now, to prescribe in minor cases themselves. Whether

the present qualifications of an apothecary are too exacting for such a purpose may be a matter of argument, but some such qualification all vendors of drugs should possess. It was unquestionably intended, when the first charter to the Society of Apothecaries was granted, that they should have the exclusive privilege of selling drugs, and if all chemists and druggists were to pass the necessary examination for an apothecary's licence it would only be carrying out the original design. But if such a reform were instituted, there can be little doubt that the ordinary medical practitioner, registered as a surgeon and apothecary, who keeps a surgery and there dispenses his own prescriptions, would have to concede something in his turn. It might possibly be found necessary to enact that all licensed apothecaries, whether also registered as surgeons or not, should be compelled to keep an open shop for the sale of drugs on demand, and to make up the prescriptions of other practitioners if asked to do so. Such a regulation would naturally tend to compel all practitioners, in the ordinary sense of the term, to take the physician's degree, inasmuch as no surgeon can prescribe, except in direct aid of external surgical treatment, without being registered either as a physician or an apothecary. It cannot be doubted that such an innovation would meet with opposition, but it is difficult to see how the present standard of druggists can be raised without rendering it inevitable. At the same time, while things remain as they are, the Society of Apothecaries will act prudently in not seeking to press their privileges too far. Many people, especially among the poorer classes, readily resort to the chemist for medicine, and perhaps a little advice; and although he knows that he prescribes—if it may be called prescribing—at his peril, it is absurd to suppose that he is not competent to deal with trifling ailments. It is, of course, desirable that chemists and druggists should be properly qualified men, but the public are not inclined to look with favour upon prosecutions, the chief object of which appears to be to put fees into the pockets of the doctors, or into the coffers of privileged bodies.

We have also seen articles on the case in the *Birmingham Daily Post*, the *Leeds Mercury*, and the *Manchester Guardian*. The *Birmingham Daily Post* describes the prosecution as of a "purely trades-unionist character," and declares that "it has no plea of public safety to recommend." After a summary of the evidence the *Post* concludes:—"In the justice, as well as the public policy of this verdict, most impartial persons will readily agree. It is important, of course, that the public should be protected against doctoring by unqualified persons, and chemists and druggists must be prevented from administering medicines indiscriminately on their own responsibility; but it would be a great hardship, not only upon chemists, but upon poor persons, if it were made compulsory in every case where a man has a toothache, a gumboil, a chilblain, or a cold in the head, to pay a doctor's fee in order to obtain the necessary medicine."

The *Leeds Mercury* concludes a notice of the case in these words:—"It is a difficult matter, no doubt, to say how far it is in the interest of the public that pharmaceutical chemists not holding an apothecary's certificate should exercise a discretion in advising their customers, but on the whole we are disposed to think that the judgment given in this case is a sound one."

The *Manchester Guardian* reviews the case, but expresses no opinion.

The *Medical Press and Circular* is the only medical journal which has appeared since the decision, and this one adopts a very moderate tone. After complaining of the criticism in which Sir Henry James indulged, and regretting the verdict, this paper says the jury "did not give any reasons for their verdict, but our impression is that their judgment was biased by the belief that the custom among chemists of prescribing for their customers is fraught with more good than evil to the public, and that the great convenience of such a custom more than compensates for any evils that may occasionally result from it. We would not for a moment allow such a plea, as Mr. Shepperley's conduct in giving medical advice to his customers was, as in the case of other prescribing chemists, wrong in principle, although it may not have been strictly illegal. At the same time we must admit that such a practice is not without its 'extenuating circumstances.' If it be the legi-

timate business of the chemist to dispense medicines, and to dispense only, is not the legitimate business of a medical practitioner, who is practising within a stone's throw of half-a-dozen chemists, to prescribe drugs, and to prescribe only? If we find the doctor trespassing upon the province that usually belongs to the chemist, we must not be surprised if the latter should retaliate, especially when the alternative before him is either to sell a simple saline mixture for some trifling complaint, or to turn away and perhaps offend his customer. At all events, although the practice is not only wrong in principle, but often wrong in practice, it is doubtful whether the present law does, or whether any future Act of Parliament could, entirely put a stop to a 'custom' which is so generally observed by the smaller chemists, and the detection and perils of which it is so easy to evade. We must rely chiefly upon ourselves, and upon a more educated discriminating public opinion, if we hope to see the prescribing chemist become merely an historical feature of our social economy."

Chemists' Assistants' Association.

At a meeting held on October 23, 1878, Mr. F. W. Branson read, before a full meeting, a paper on the "Chemistry of Aloes," in which he described the various kinds of aloes, the modes of preparation, and the structure of the leaf of the aloe plant. Mr. Branson then proceeded to notice the different aloins, their preparation and purification, and the compounds they form with oxidising agents and bromine. The chemical reactions by which they may be distinguished were next mentioned and practically illustrated. Mr. Branson concluded by expressing an opinion that, although so much light has been thrown on the chemistry of aloes by Dr. Tilden, there is still much work to be done on this interesting subject. Numerous slides illustrative of the paper were then shown under the microscope. The paper was followed by a lengthy discussion. Votes of thanks were passed to Mr. Branson for his useful paper, and to Mr. Wallis, the chairman of the evening.

At a meeting held on October 30, when Mr. Branson occupied the chair, after the minutes of the previous meeting had been read and confirmed, an interesting paper was read by Mr. W. K. Glover on the "Genus *Quercus* and its Pharmaceutical Interest." The author described the two official species, *Quercus pedunculata* and *Q. infectoria*, and the non-official *Quercus suber*. Oak bark, having never been much used in medicine, but chiefly employed by tanners, was passed over. The production of galls on the twigs of *Quercus infectoria* by punctures of the female of the *Diptolepis gallæ tinctoria* was described, and the chemical composition of galls stated. Mention was made of the early use of galls in chemistry, Pliny having stated that "paper saturated with an infusion of galls was used to detect the presence of sulphate of iron when used to adulterate the more costly verdigris." Mr. Glover then passed on to notice the *Q. suber* as supplying that invaluable substance cork. He described the manner in which the trunks are stripped, and the cutting of corks by both machine and hand labour. He mentioned the uses to which cork has at various times been applied. The paper was illustrated by a liberal supply of specimens, for which Mr. Glover tendered his thanks to Messrs. Clark, of Portsmouth. A discussion followed, and, after votes of thanks to the reader and the chairman, the meeting terminated.

Metropolitan Reports.

LONDON.

WATCH STEALING.—On October 23 at the Central Criminal Court, John Buren, manufacturing chemist, was sentenced to seven years' penal servitude for having obtained from Mr. Benson a valuable gold chain, by means of a post-office order which he had altered by chemical appliances from 1s. 3d. to 17l. 10s. As no post-office order is issued for more than 10l. suspicion was at once aroused against the prisoner.

PROSECUTION FOR THE SALE OF UNSTAMPED MEDICINES.—At Marlborough Street, on October 17, W. Evans Hallett, trading under the name of "Snow," was summoned before Mr. Mansfield, at the instance of the Commissioners of Inland Revenue, for several offences under the Act 52 George III., c. 150—namely, selling certain specifics, or secretly-made medicines, without having paid the duty thereon. A gentleman from the solicitor's department of the Inland Revenue appeared in support of the summons, and Mr. J. Seymour Kiseh, of Argyle Chambers, appeared for the defence. An officer in the employ of the Inland Revenue gave evidence, showing that he went to the defendant's shop, and producing one of the defendant's handbills, asked for a bottle of each of the medicines mentioned therein, and he was supplied with them. Mr. Kiseh submitted there was no case, inasmuch as the prosecution had not shown what it was that the defendant had actually done. Mr. Mansfield said it was clear to him that the defendant was carrying on a nefarious trade, and he should fine him 10l. in each case, or 30l. in all.

FATAL EXPLOSION OF AN OXYGEN RETORT.—On Oct. 16, Mr. Edward John Wrench, son of Mr. Wrench, the well-known optician, of Holborn, was engaged in making oxygen at his residence, in 39 Gray's Inn Road, when the retort exploded, smashing the fire-grate, blowing the windows out of the sashes, and filling the rooms with dense smoke. Mr. Wrench was fearfully injured; he had sustained a cut 6 inches long in the chest, which exposed the lungs, and a jagged wound on the left side of the neck, exposing the muscles and veins. Mr. Reginald Taylor, surgeon, was called in, but the sufferer died within half-an-hour from collapse and hemorrhage. Mrs. Elizabeth Gibson was also fearfully burned about the face. The details given in the public reports do not account for the explosion. It does not, however, stand alone. At least two other fatal explosions have occurred, within recent years, during the manufacture of oxygen. In both of these binoxide of manganese was used as the source of the gas, and it was afterwards discovered that the oxide was adulterated in one case with soot, and in the other with antimony sulphide. These mixtures are as dangerous as gunpowder when placed under the conditions required for the manufacture of oxygen, and it is always wise to test beforehand the material about to be used.

THE PRICE OF A SET OF TEETH.—At the Westminster County Court on October 15, Mr. Faulkner, dentist, Mornington Crescent, sued his nephew, Mr. Buehnart, for the sum of 8l. 8s., being the price of a set of false teeth supplied to the defendant's wife.—Plaintiff's case was that the defendant's wife came to him for the purpose of getting a set of false teeth. She questioned him as to which would be the best, and he told her she could either have them set in gold, alloy, or vulcanite, and she subsequently chose vulcanite, on account of its being the cheapest, the price being only 5l. 10s. He supplied the teeth, and extracted a number of stumps; for that he charged her 1l. 1s., making a total of 6l. 11s. Until 19 months after the delivery of the bill he heard nothing of the defendant. However, the bill was eventually paid. In November, 1877, the defendant's wife again came to him, and then she said she did not like the teeth, they were too thick, and she asked whether she could not have some thinner. He told her the alloy or gold would be thinner, but of course would cost more money. She said she did not mind that, and chose some set in alloy, the price of which, he told her, was 8l. 8s. He applied for the money, but defendant refused to pay more than two guineas.—For the defence it was stated that as the vulcanite teeth did not fit, it was arranged she was to have some set in alloy, and pay two guineas more than she had already paid. The vulcanite ones were given back to plaintiff, and 2l. 2s. was offered him, which amount had been paid into Court.—His Honour thought the plaintiff was entitled to recover, and gave judgment for the amount claimed, with costs.

ACTION FOR RECOVERY OF SALARY.—On October 15 at the Shoreditch County Court, the case of Oldis v. Davis was heard. It was an action to recover 6l., being four weeks' salary, one of which was in lieu of notice. The defendant is a chemist at Fulham Road, Brompton. The plaintiff, having served his apprenticeship to the defendant, was retained in his employment from October, 1877, to the end of June, 1878. During that period the defendant was nearly

always away through illness, leaving the plaintiff in charge of the business, which he carried on very satisfactorily. It was arranged that the plaintiff should have three weeks' holiday, commencing in July, his place being filled by a substitute; he accordingly left. In the first week of his absence he received an intimation from the defendant that his services were not required by him any longer. Subsequently the defendant consented to retain the plaintiff until he was able to obtain another situation.—Plaintiff, cross-examined, said he was engaged as temporary assistant, and could have left at any time by giving a week's notice. He knew a person had been engaged to take his place, but he still expected to be paid his salary during the holidays. He had left under the impression that the engagement still continued, especially as he had postponed his holidays for the convenience of the defendant.—For the defence it was contended that the plaintiff had never been engaged permanently, and that it was not customary to give temporary assistants holidays. It was also relied, as against the plaintiff's claim, that he had himself voluntarily quitted the defendant's service, by virtue of a letter which he sent him before taking his vacation.—The defendant, cross-examined, admitted that he expected the plaintiff to return at the expiration of three weeks' absence, and that he had written him a letter to that effect.—His Honour said the plaintiff's case would justify the defendant, while the defendant's conduct would establish the plaintiff's right to recover. Both had acted foolishly in employing language they did not appear to comprehend.—Judgment for defendant, less costs.

ST. BARTHOLOMEW'S HOSPITAL.—In the year 1545, when King Henry VIII. "of happy memory" filled the throne of England, a statute was passed which required the occupiers of houses within the liberties now covered by Newgate Street, in the parish of Christchurch, to pay tithes at the rate of 1s. 4½d., if their rent was 10s. a year, and 2s. 9d. if it amounted to 20s. And these tithes were the property of St. Bartholomew's Hospital. Two years later a charter was granted which confirmed this levy, and the 2s. 9d. in the pound was paid, though it seems uncertain whether the tithes were always uniform. In the Great Fire of London the records determining the precise limits of the tithed property were destroyed, and thereafter a *modus* or customary payment was agreed to, which was paid for 20 years. In 1680 the Governors of the Hospital had filed a bill against some of the occupiers of the houses claiming 2s. 9d. in the pound, and the Court of Exchequer held that from 1547 to 1564 that rate of tithe had been paid, but the Governors had consented to accept a less rate.

On November 4, in the Chancery Division of the High Court of Justice, the Governors of the Hospital sued Sir Benjamin Phillips, the present owner of the property, for tithes at the rate of 2s. 9d. in the pound on the annual rental. In his judgment on the matter the Master of the Rolls decided to the following effect. He felt that in seeking to inflict so heavy a rate on the defendant the Governors of the Hospital were committing a serious injustice. Although 2s. 9d. had been paid for 20 years by tenants whose rental was 20s., it was clear that no one had dreamed when the tithe was imposed that it was to be rated at 2s. 9d. in the pound: indeed, after the fire it had been contemplated to accept a lesser rate, say 8d. or 9d. in the pound. But some astute lawyer had discovered the legal rights; the Court of Exchequer had found that the Statute of Limitations did not apply here, and as there was no evidence of any exodus or customary payment being made, the plaintiffs had a legal right to the rating, which, in fact, was heavier than a tithe. He felt bound to follow the previous decision of Lord Eldon, that the effect of the prior award was that the tithes were to be levied on the full annual value of the houses at the rate of 2s. 9d. in the pound. The plaintiffs having a legal right to be in Court he was compelled to give them costs.

CAMBERWELL.

VIOLET POWDER.—On October 30 a report was presented to the Camberwell Vestry by Dr. Albert J. Bernays, the analyst of the parish, stating that during the past quarter he had examined three violet powders. One of them was of excellent quality and everything that was desirable as to the character of the starch. But the other two—Nos. 105 and 106—were very objectionable, and he had given the

inspectors certificates of prosecution. Whether they should be employed, except in the way of warning, he was not prepared to say. Nevertheless, he would add a caution, which mothers might generally avail themselves of—viz., only to buy such powders of druggists and respectable perfumers and hair-dressers. The admixture of nearly 75 per cent. of gypsum in the case of No. 105, and nearly 50 per cent. of soapstone in No. 106, would indicate the uncertainty of the preparation. There was no white arsenic, but whenever common powders were admixed as make-weights there would always be some danger that some positively injurious compound might be added by mistake. The report was referred to the Sanitary Committee.

CLERKENWELL.

PRESCRIBING CHEMISTS.—On October 24 Dr. Thomas held an inquest at the Clerkenwell Coroner's Court relative to the death of Mary Fiddes, aged seven weeks, the daughter of Mary Fiddes, a single woman, of 7 Little Bath Street. It appeared that on Friday the mother finding that the deceased was in an ailing state, and thinking that a grey powder would do it some good, went to a neighbouring chemist, and he having heard her statement advised her to give the child another mixture, which she purchased and gave as he directed. The deceased was taken worse, and on Sunday morning the mother, with a friend, took the child again to the same shop, where some powders were purchased for it, and the friend noticing that it was black in the face called the assistant's attention to it, and then he advised them to take the child to a medical man, which they did, but as it was in a dying state nothing could be done for it, and it expired soon afterwards. Dr. Betts, the medical man to whom the deceased was taken, said that death was from inflammation of the lungs. He had to complain that chemists were allowed to advise and prescribe for persons. He had opened a dispensary, where at certain hours those that did not like to go to the parish for medical relief could, for the small sum 4d., have advice and medicine. The assistant, who advised the mother of the deceased to have the things he told her, instead of grey powders, did wrong, for grey powders were the right thing. The jury returned a verdict in accordance with the medical evidence.

PADDINGTON.

MR. ALFRED W. STOKES, the newly-appointed analyst for Paddington, states in his first quarterly report that 13 out of 21 articles of food (including milk) examined by him were adulterated. He analysed 14 samples of milk: 12 of them contained added water in proportions varying from 10 to 20 per cent. Twelve of the examined samples came direct from the country supplies, so that the adulteration cannot be wholly laid at the door of the London retailer. The Public Health Committee have made such urgent representations on the matter that the Vestry have determined to take vigorous proceedings, not only against the retailers, but also against the wholesale dealers in milk.

ROTHERHITHE.

PRESCRIBING CHEMISTS?—On October 31 or November 1 Mrs. Elizabeth Barrett, aged 79, and residing at 21 Princes Street, Rotherhithe, went to the shop of Mr. Thompson, chemist, Rotherhithe, and complained of great pain. She was supplied by the assistant, Mr. John Mill, with a mixture consisting, according to the newspaper reports, of tincture of rhubarb, 10 drops of opium (1), carbonate of potash, and peppermint. She was afterwards found lying unconscious beneath a table at her residence. Mr. Donald Murdoch, surgeon, was called in, and found that she was dead. No post-mortem examination was made. An inquest was held on November 1, when Mr. Murdoch said deceased's death might have been accelerated by taking a dose of opium, *however small* the quantity, and that small doses of opium would cause death in young children as well as in aged persons. The Coroner (Mr. Carter) said the case had assumed a very serious aspect. The foreman of the jury said it was a great shame that unqualified persons should be allowed to prescribe for the poor. Had deceased gone to a medical man her life would have been prolonged. The jury concurred, and returned a verdict of "Death from syncope!"

Provincial Reports.

BARNET.

A CHEMIST IN COURT.—On October 29, Charles Leake, chemist, Whetstone, summoned before the Barnet magistrates two well-dressed women, named Isabella and Annie Yeomanson, of Liverpool Street, London, for using abusive language towards him, whereby a breach of the peace might have been caused. From the evidence of the complainant it appeared that defendants came into his shop, and, on being told to leave, called him a rogue and a vagabond. When outside they continued the abuse, and a mob congregated. Annie Yeomanson now said she had called complainant a rogue because he had seduced her sister, having first made her believe he was a widower, instead of which he was a married man with a family. The sister said she came down to see her child, of which complainant was the father, and who lived with him, and he refused to allow her to see her, pushed her down, and broke her watch-chain. The Bench said abusive language had been used, and defendant must pay the costs, 10s. 6d.

BIRMINGHAM.

FIRE.—At four o'clock on the morning of October 21 a fire was discovered on the premises of Messrs. Cooper & Smith, wool merchants and manufacturing chemists, Morville Street. The building is of one storey, and extends over an area of about 90 feet by 50 feet. A quantity of valuable machinery was used on the premises, and as the flames rapidly spread the damage done was considerable, being estimated at between 2,000*l.* and 3,000*l.* The cause of the fire is unknown. The damage both of the building and contents is covered by insurance.

CHATHAM.

POISONING BY BURNETT'S FLUID.—On October 17 and 18 an inquiry was held at Chatham into the circumstances of the death of a soldier named Bridge. He had been ordered a dose of cathartic mixture by Dr. Hunt, surgeon-major, which was supplied to him by an orderly named Davis, from a bottle believed to contain a mixture of salts, senna, and ginger. This bottle had been sent the day before with two others to the garrison surgery to be filled. The sergeant in charge had been too busy to fill the bottle himself, and Davis says he was told by the sergeant's orderly Bowles, to fill it with cathartic mixture, from a bottle kept beneath the counter. Bowles says that Davis asked him where the cathartic mixture was kept, and filled the bottle without his permission. Close by the cathartic mixture was another jar, very similar in shape, containing Burnett's fluid, and labelled "Poison." The Burnett's fluid, owing to its containing a large percentage of iron, was very much like the cathartic mixture in colour. The cathartic mixture bottle was filled with this fluid by Davis, who thought that both bottles held the same preparation. Shortly after taking the fluid Bridge was seized with violent vomiting; he was taken to the hospital, where he died three days later. After an inquiry, lasting ten hours, the majority of the jury came to the conclusion "That the deceased James Bridge came by his death by having received, accidentally, a dose of Burnett's disinfecting fluid in the place of cathartic mixture. We express our regret that the poisonous fluid should have been placed in close proximity to the other above-named mixture." Mr. Edward Fish was the only dissentient; and his verdict was that the sergeant was guilty of neglect for allowing the bottle to be where it was, and that the two orderlies were incompetent.

COVENTRY.

COVENTRY AND WARWICKSHIRE PHARMACEUTICAL ASSOCIATION.—The first general meeting of members and associates of the above society for the present session was held on October 10 in the committee room of the Provident Dispensary, Coventry. Mr. Councillor Wyley occupied the chair.

After the presentation of reports the President announced that at the end of the session the following prizes would be awarded to the most successful students:—First prize, a

two guinea materia medica cabinet (by the president); second prize, books or chemical apparatus, value one guinea; one prize, value one guinea, to the most efficient "preliminary" student, and a prize, value one guinea, for the best original essay on any subject connected with pharmacy, chemistry, or materia medica. After some further remarks he called upon Mr. George Walker (of the firm of Wyleys & Co.) to deliver his lecture on "The Model Pharmacist."

After a humorous introduction the lecturer enlarged upon the importance of every candidate for pharmaceutical distinction taking the highest possible ideal as his model. The more unattainable it might be the more he would benefit by his endeavours to imitate it. Quaint George Herbert said:—

Pitch thy behaviour low; thy projects high;
So shalt thou humble and magnanimous be;
Sink not in spirit; who almeth at the sky,
Shoots higher much than he who mounts a tree.

Following the example of the eminent divine, who preached the celebrated impromptu sermon on the word "malt," Mr. Walker proceeded to divide his text, "Pharmacist," into the following headings:—P. perseverance, H. honour, A. ability, R. receptiveness, M. manliness, A. accuracy, C. calmness, I. industry, S. sympathy, T. tact. These qualifications were necessary to form a "Model Pharmacist," and although not quoted in all the wholesale drug lists, undoubtedly had a market value and were "kept by all respectable chemists."

After commenting on these qualities separately, the lecturer concluded as follows:—"We have thus rapidly and imperfectly placed before you some of the qualifications which should be possessed by the 'model pharmacist.' We have not referred to the scientific side of the question, because we are sure it will be more forcibly inculcated upon you by the course of study pursued here than by any words of ours. Let us by all means cultivate the head, but do not therefore slight the education of the heart. Unlike the alchemist of old, our path of duty leads us not away from the world, but into the thickest of its struggle. We have heard of a misanthropic man who caused to be inserted upon his gravestone some such words as these:—'Born to be a man, but died a druggist.' Let us make no such mistake. The world is bad enough, let us strive to make it better. A Yorkshire legend runs:—

The world is full of fools, and he
That would not see an ass
Must stay at home, lock himself in,
And break his looking-glass.

If there be any truth in this dark picture of life how needful it is that we, who by education should be scholars and gentlemen, should prove our right to the title we bear. To sum up the whole matter in one sentence—wherever we find 'a model pharmacist, we should also find a model gentleman.'"

The lecturer was listened to with the greatest attention, and was frequently very heartily applauded. Mr. Hawthorne (Wallsgrave) proposed, and Mr. Hodgkinson seconded a vote of thanks, which was carried by acclamation.

The remainder of the evening was spent in examining the various specimens of *materia medica*, chemicals, &c., with which the table was covered, and a vote of thanks to the chairman brought the meeting to a close.

It was announced that the opening meeting of the students' section would take place on October 22, when there would be an exhibition of interesting specimens, microscopes, galvanic and electric apparatus, &c., and Mr. Fredk. Barrett, F.C.S., would deliver an address on "Michael Faraday." The next meeting of the members would be held on November 14 when J. C. Gibbs, Esq., would lecture "On Nothing."

DERBY.

A CHEMIST FINED FOR ASSAULTING THE POLICE.—On October 25 at the Derby Police Court, Richard Somerley Crossley, a chemist, was summonsed for assaulting police constable Brown when in the execution of his duty, on the 17th ult. The policeman stated that about a quarter past eleven on the night in question he was standing at the Normanton Road end of Leopold Street, when the defendant came up, in company with Mr. Henry Pratt and Mr. Bliss. As they were passing him the defendant remarked, "What do you stand blowing out your paunch here for?" at the same time giving him a blow on the lower part of the body. For an instant it almost "doubled him up," but as soon as he

ad recovered himself he followed the three gentlemen. On overtaking them he placed his hand on the defendant's arm, and said, "You are my prisoner. I shall take you to the lock-up and charge you with assaulting me." The defendant replied, "Good God I do not take me. I did not intend to hurt you." Witness, however, took him to the police station, and after the superintendent had heard a history of the case, he decided to allow the defendant to go home, but informed him that he would be summoned for the offence. For the defence, Mr. Henry Pratt and Mr. Bliss, who were with the defendant at the time, were called. They stated that they did not see any blow struck by the defendant, and were quite astonished when the charge was preferred. After a lengthy hearing the magistrates decided to fine the defendant 20s. and costs.

DOVER.

THE NEW MAYOR.—On November 9 the Dover Town Council elected Alderman Alexander Bottle as Mayor for the coming year. Mr. Bottle was, a year or two ago, chosen by the Court of Aldermen (which then contained a large majority of Conservatives) to fill a vacant seat in that body, but his election was never submitted to the Burgesses. Another candidate for the Mayoralty was proposed by the Liberal party, but Mr. Bottle was elected by the casting vote of the outgoing Mayor. Twelve mayors in succession, with only a single break, have been chosen by the Conservative party.

DUBLIN.

SUPPOSED DEATH FROM CHLORODYNE.—We recorded last month the death of Mr. John West. Following the *Irish Times*, which in turn depended on the opinions of Dr. Samuel Mitchell and of Dr. Evans, we stated that the death was thought to be the result of an overdose of chlorodyne. It appears that, between the date of the announcement and the inquest, the doctors changed their opinion, and when examined before the Coroner stated that Mr. West had died of pulmonary hemorrhage. The verdict of the jury was, of course, in agreement with the medical evidence.

DURHAM (BOLDON).

EMBEZZLEMENT BY A CHEMIST.—At the Durham Assizes on October 28, John Francis Ramsay, 31, manufacturing chemist, pleaded "Guilty" to endorsing an order for the payment of 18*l.* 15*s.* 2*d.* by procuration for, and in the name and on the account of, John Fawcett and another, trading under the style of "The North of England Oil and Grease Company," with intent to defraud, at Boldon, on June 9, 1877; also to embezzling 77*l.* 2*s.* 10*d.*, the moneys of John Fawcett and another, his masters, at Boldon, on September 28, October 27, and December 21, 1877. He was sentenced to 15 months' imprisonment.

GLASGOW.

MESSRS. CHARLES TENNANT & SONS, of the St. Rollox Chemical Works, have contributed 3,000*l.* to the fund for the relief of the shareholders in the Glasgow Bank.

HALIFAX.

THE HALIFAX DISTRICT CHEMISTS AND DRUGGISTS' ASSOCIATION.—The first meeting of the session was held on October 7. Mr. Brooke, president, in the chair. The report for the year was read by Mr. Shaw, the honorary secretary. It stated that the number of members of the Association was 19, and the average attendance at meetings had been six. It was hoped that in the forthcoming session greater attractions might be presented. An attempt had been made during the year to frame a minimum price list, but the perseverance of the members had given way under the self-imposed task. The Liverpool price list was now under consideration. The desirability of adopting the national bank holidays had been suggested by this Association, and by its powerful neighbour the Halifax Drapers' Association. The suggestion had been courteously received and was now under consideration, but it was not likely to be adopted very soon. Counter prescribing was referred to in the report, and it was remarked that the Pharmaceutical Society had treated the Trade Association somewhat curtly.

The Medical Bill in Parliament had been pushed out by Jingoism, but would probably have a resurrection. The Dentists' Act was also alluded to. The report thus concluded:—The future before us may bring disaster, if not shipwreck, to our craft. Standing in undeviating line, or grouped in deadly British square, let us face it unitedly and with courage. Let us not cripple our energies by dark foreboding, or cherish dismal surmise. And since in the social fabric, as in mortared erection, it is the wasting of the mortar that starts disintegration and prophesies decay, let us not in transaction between man and man lower our dignity or lessen mutual respect by ungenerous act or unfair suspicion.

It is not given to many of our craftsmen to accumulate a splendid competence. It is given to fewer still to reach forth with untiring perseverance, and drag forth from the secrets of nature some new law or fact that will delight the votaries of science and benefit the world. But it is denied to none of us to assist the public weal and build up for ourselves an honourable name, whilst we encounter the irritations of an infinitesimal and kaleidoscope business, and strive patiently for magnanimous bearing despite the trammels of a statute-laden commerce.

The report was adopted, as were also other reports, by the treasurer and librarian. On the motion of Mr. Hebden it was resolved to hold the annual dinner of the Association on December 10, which was the date ten years ago, when the inaugural dinner was held. The excise regulations respecting quinine wine were mentioned, and members were recommended to make quinine wine of B.P. strength. The following officers were elected:—Mr. Farr, president; Messrs. Brooke and Shaw, vice-president; Mr. Brooke, librarian; Mr. Councillor Brierley, treasurer; Messrs. Stott, Dyer, Jessop, Swires, and J. Brearley, committee; Mr. W. C. Hebden, honorary secretary.

LEEDS.

MR. TITUS BENNETT STEAD, chemist and druggist, a Conservative, has been elected Town Councillor for the West Ward of Leeds.

LIVERPOOL.

THE CHEMISTS' ASSOCIATION CONVERSAZIONE.—This annual gathering occurred on the 7th instant, the Royal Institution being, as usual, the *locale*. A large and influential company attended. The various museums in the institution formed a background to the other attractions. Microscopes were exhibited by Messrs. H. C. Beasley, J. C. Thompson, A. Leicester, J. H. Day, A. H. Mason, J. Newton, M.R.C.S., and Dr. Symes. Optical, scientific, and artistic works were exhibited by Messrs. J. T. Armstrong, Knott, Mackinlay, Elkinson, Chadburn, and Keith. Mr. Topham practically illustrated the art of glass-blowing. In the course of the evening Mr. Edward Davies lectured on "Phosphorescence and Fluorescence," Dr. Symes exhibited and explained the electric light, and Mr. W. H. Golding, of the Polytechnic, London, showed a series of views of Cyprus, aided by the oxyhydrogen lantern. A military band performed at intervals, and refreshments were provided. The charge was 2*s.* each person.

LONGTON.

ALLEGED INFRINGEMENT OF THE TRADE MARKS ACT.—At the Longton Police Court on October 9, Mr. Thomas Turner, chemist, charged Mr. Samuel Taylor, ginger-beer, &c., manufacturer, Normacott, with an infringement of the Trade Marks Act. The information alleged that on September 14 a certain article, to wit, a bottle of ginger-beer, bearing the trade-mark of Thomas Turner, had been sold, which said trade-mark was "falsely or wrongfully, or without lawful authority and excuse," used by the defendant. Mr. G. H. Hawley appeared in support of the complaint, and Mr. Welch for the defence. Mr. Hawley produced documentary evidence to show that the trade-mark had been duly registered and a certificate granted. This he produced, and said the same had been published in the *Trade Marks Journal*, a copy of which was put in. The trade-mark was "T. Turner, Longton," which was impressed upon the bottle. Mr. Welch, at the outset, took an objection that the trade-mark was not in a sufficiently distinctive form, and therefore in point of law showed no distinction as to the registered

mark. A long argument ensued on this point, and Mr. Hawley suggested that if the magistrates were opposed to his view of the case he would ask for one for a superior court, and thus shorten the proceedings. Ultimately it was decided to hear the case on its merits. The complainant, Mr. Turner, having given evidence, an assistant in his shop was called, and deposed to purchasing the bottle of ginger-beer produced from the shop of a person named Merry, in Stafford Street. That bottle bore his employer's trade-mark, "T. Turner, Longton." An assistant from Merry's shop was called and spoke to selling the ginger-beer in the bottle to the last witness, for which she charged 4d., 2d. being for the ginger-beer and 2d. for the bottle if not returned. The bottle was not sent back, but it was one received from Mr. Taylor's establishment.—Mr. Welch cross-examined the witnesses with a view of showing the possibility of bottles being mixed. This was in point of fact the defence. Various bottles belonging to other firms, it was said, were being continually brought in by the carters and others.—Mr. Welch submitted that there was not the slightest proof of the defendant falsely or wrongfully interfering with Mr. Turner's bottles.—Several witnesses from the establishment of Mr. Taylor gave evidence that the utmost care was exercised as to using any other than the bottles belonging to their employer. They had a number of bottles belonging to other parties, which, when discovered, were put on one side and exchanges were made. Even with Mr. Turner three dozen of his bottles had been exchanged, and if one had been filled it was an accidental occurrence which might happen in any establishment.—After some consideration the Bench coincided with Mr. Hawley's legal view of the case—that the trade-mark of Mr. Turner was sufficiently distinctive and within the meaning of the Registration Act. They agreed, however, with regard to the merits of the case, that it was proved only one of Mr. Turner's bottles had been discovered as coming from Mr. Taylor's establishment; and as it was admitted in evidence that there had been an interchange of bottles, the one in question might possibly have been sent out in mistake, and not by a wilful act. The case would therefore be dismissed.

LYMM.

MASONIC INSTALLATION.—The annual meeting of the brethren of the Earl of Chester Lodge, No. 1,565, was held in the Masonic Hall, Church Green, Lymm, on Thursday, the 7th instant, when Brother I. H. Evans, chemist and druggist, who had previously been elected by the unanimous vote of the brethren, was duly installed W.M. for the ensuing year.

MALTON.

ADULTERATED SWEET SPIRITS OF NITRE.—At the Malton Petty Sessions on October 12, was heard the first charge of adulteration of sweet nitre which had occurred in that neighbourhood. Tindall Anderson, grocer, &c., of Old Malton, was charged by Superintendent Park, inspector under the Food and Drugs Act, with selling sweet spirits of nitre, which, according to the analysis made by Mr. Fairley, public analyst of Leeds, contained 46 per cent. of water, but no appreciable quantity of nitrous ether, the article on which its medicinal value entirely depended. The defence was that the nitre was sold in the same state as when procured from a wholesale druggist's firm; also that he told the inspector that it was diluted.—Mr. Park, however, denied that anything of the kind was said until after he had purchased it, and said that he was going to send it for analysis. The Bench told Mr. Anderson he had his remedy against the firm he bought it of, if it was not of the quality it purported to be.—They fined him in the mitigated penalty of 10s. and 8s. costs, which Mr. Anderson paid, remarking that he expected the firm would return him the money.

MANCHESTER.

STABBING A CHEMICAL MANUFACTURER.—At the Manchester City Police Court on October 21, an operative baker, named William Brown, was committed for trial at the City Sessions on a charge of stabbing Mr. R. Cheetham, chemical manufacturer, Clayton.

VACCINATION.—A refractory anti-vaccinator was tried at

the Manchester City Police Court on November 6. We cannot find space for the whole of the proceedings, though they are sufficiently amusing to be worth a record. We extract some of the statements of the defendant. He said he had been the medical adviser of his own family, and had "never been troubled" with a medical man for the last fourteen years. He was able to cure his children of any disease, including small-pox. He had vaccinated his children, but not by scratching the skin and admitting filthy stuff. He kept them "com danger from foul air, kept them warm, and gave them pure food. That was his way of vaccination, and so long as he was "medical assistant" to his own family he would go by his way and not by the ways of medical men. It was part of his duty as a parent to keep all evil from his children. Vaccination was a filthy and monstrous act, and a thing he should prevent for his children until they were of a certain age and could decide for themselves. His children brought home the small-pox from the Wesleyan School in Eagle Street, and he treated and cured them all in less than three days. The magistrate said: "You could not cure small-pox in three days?" Defendant said he did, and they had it to the fullest extent. "If you take this" (showing a small printed pamphlet) "and read it, you will understand." When the principle he advocated was followed there was no danger whatever from small-pox; it did not even leave marks. The whole disease was contained in the absorption of matter into the blood, and this matter would come out when nature was assisted. It was at first thin, and lay near the thin skin, but got thicker and thicker from the feverish heat of the body, and penetrated more into the system. By his method—washing the body three or four times a-day—this matter was excluded. He had written to Mr. Cross, the Home Secretary, acquainting him with this cure, in order that he might make use of it for the million. He was fined 10s. and costs on each of two cases, and, as he refused to pay, a distraint was ordered.

NEWCASTLE.

THE suspension is announced of Messrs. Knight & Son, merchants, of London, Liverpool, and Newcastle-on-Tyne. The liabilities are about 100,000*l.*, a large part of which will not, however, ultimately rank against the estate. The firm has been established over 30 years, and was of good standing and credit. The failure is attributed to the great fall and heavy losses in chemicals. The books are in the hands of Messrs. Cooper Brothers & Co.

ROTHERHAM.

LIGHT WEIGHTS AT A CHEMIST'S.—At the Rotherham Police Court on October 21, Joseph France, chemist, Church Street, Rotherham, was fined 10s. and costs for having had in his possession, on the 9th ult., a 2-lb. weight which was 1 oz. 15 drachms light. In defence Mr. France said the weight was only used in the warehouse. Apparently it had become too light by the loss of the lead which bears the Government stamp. He made a practice of looking at the weights weekly, and, therefore, it could not have been long unjust.

SHEFFIELD.

FINES FOR SELLING FIREWORKS.—At the Sheffield Second Court on October 24, William Stevenson, druggist, Infirmary Road, was summoned by the officer of the Local Authority under the Explosives Act, for a breach of the 21st section thereof, which requires all dealers in gunpowder, fireworks, and other explosives, to register their premises with the Local Authority, and to renew such registration annually. The officer stated that on the 17th ult. he found 30 lbs. of gunpowder on Mr. Stevenson's premises, which premises had been registered on November 8, 1876, but the registration had not since been renewed. Mr. Stevenson said that he was not aware that he was required to re-register his premises, and thought the officer ought to have given him notice. The Bench informed him that the responsibility was with the dealers, and inflicted a penalty of 20s. and costs.—Joseph Ibbotson, druggist, Ecclesall Road, and Sydney Eyre, druggist, Infirmary Road, were each fined 10s. and costs for similar offences.

CHLORODYNE AND THE GUARDIANS.—A very pretty little quarrel has arisen from the innocent subject of chloro-

odyne. We are sorry we cannot give the whole history of the rise and progress of the struggle. But the following gleanings are of interest, and the fact that the contest has been celebrated by "one of the greatest anonymous poets of the age," and been recorded in the grave pages of the *Lancet*, sufficiently excuses our presumption in bringing forward what little we know of it.

It appears that the district medical officers have been in the habit of prescribing Carr's chlorodyne, prepared by Mr. George Carr, 165 Devonshire Street, Sheffield. The Board of Guardians, which includes Mr. Fretwell Hudson, chemist, 165 West Bar, Sheffield, seem to have objected to this, and to have formally recommended several alterations in the way in which medicines should be supplied. At a board meeting held on October 9 the following letter was read:—

"Oct. 8th, 1878. Sir,—The district medical officers, having met to consider the question referred to in your letter of the 1st instant, have come to the conclusion with regard to 'No. 7' of the recommendations adopted by the board as to the supply of medicine for the union poor, that it will be best to continue the use of Carr's chlorodyne, as it is the most reliable preparation of the kind that has come under their notice. The medical officers see no reason why Chance's bicarbonate of soda should not have a trial.—Yours, &c., "W. SKINNER."

From this Mr. Hudson drew the conclusion that the doctors did not know how to make up a prescription, a conclusion which hardly seems to follow from the letter itself. He would, he said, take care that it (the letter) was thoroughly circulated in the trade journals. The doctors were always showing the guardians up, and now he would see that they got it strong.—The Chairman said he did think that the medical men should pay more regard to the decision of the board. It had been the practice of the doctors to "kick" the board whenever they could, and this was another proof of it. He thought they had acted very unwisely.—Mr. Bacon thought the medical officers reflected upon themselves if they could not make chlorodyne equally as well as Mr. Carr.—Mr. Hovey thought some attention should be paid to the skilled opinions of the medical men who had met especially to consider the matter.—Mr. Hudson complained of the bad writing of the doctor's prescriptions, the result being that many medicines had to be prepared by guess. If there was any incompetency, it rested with the doctors, and not with the dispenser (we confess we do not see the connection of this remark).—The Chairman gave notice that at the next meeting he should move that the seventh recommendation be altered to read as follows:—"That, as the dispensary book contains a good form of chlorodyne, which can be made up at a price considerably less than was now paid, the medical officers be required to acquaint themselves with the quality of the drug so prepared, and order it as required."—Several of the guardians urged that the medical officers should come before the board and explain the reason for the action they had taken.—The Chairman said it was no use talking to a medical man, even for seven years.—Finally he withdrew his motion, and it was resolved, on the motion of Mr. Craven, seconded by Mr. Bacon, that the medical officers be requested to attend at the next board meeting.—At that meeting a deputation of six medical gentlemen, representing the poor law and sanitary officers, and headed by Mr. Matthew Leach, did attend, when the latter gentleman (according to the *Lancet*) "made an eminently happy allusion," and "indulged in a little timely facetiae."

Oh! shades of Charles Lamb, this is the witticism! Mr. Matthew Leach remarked that the worthy Chairman evidently believed that the whole composition of the human body changed within the period of seven years, and so had built up his own theory on the subject that perhaps the mind changed as well. (Laughter.) Therefore, if the Chairman argued with them after seven years they might be brought round. (Laughter.)

Further jokes or arguments from the doctors led Mr. Hudson to apologise, and say that it was the proudest day of his life to stand there, in the presence of six medical men, and hear one of them say that a chemist could prepare medicine better than he could himself.

The *Lancet* remarks on the case that parochial surgeons, naturally enough, like to have drugs dispensed in a way calculated to do their patients the most good, and so to get

them off the hands of the guardians as speedily and as creditably as possible, and that the medical officers may now arrange the dispensing of their drugs in the manner most convenient to themselves.

The latter sentence seems to us to be nearest the secret of action of the doctors in this case. We certainly think there is fair ground for suspecting one of those combinations between doctors and chemists which have been so often and so justly condemned by all parties but those immediately concerned. To explain Mr. Fretwell Hudson's interest in the matter we may remark that his own shop is just outside the workhouse gates, while Mr. Carr's is in a distant part of the town. On the 19th of the past month the *Sheffield Daily Telegraph* published in connection with this dispute the following lines, which have sufficient jingle in them to make them read pleasantly, and sufficient sense to enable them to pass muster at first sight:—

HOW TO MAKE "CHLORODYNE."

(Dedicated to Everyone in General and Some Guardians in Particular.)

List, wingless Guardians of the poor;
List, "serews" who have no seruples;
Oh, shade of Æsculapius, hear!
And tremble ye his pupils!
My muse, indignant, be at hand—
Show Ignorance no quarter;
If there's a fool in all the land,
Bray, bray him in a mortar.
"Show up the Guardians?" plainly so—
It matters not a tittle,
Since those who wish too much to know
Are those who know too little.
"How make you "Chlorodyne?" ask they,
(Good gracious! Can they spell it?)
I know the secret, and by gum,
(That's muelage) I'll tell it!
Oh, Morpheus, gentle god of sleep,
Somniferous, calm, and placid—
I can't, I *won't* the "secret" keep—
They'll give thee—prussic acid!
The formula is simply this:—
(Your paper's the vehicle)
A grain or two of common sense—
No bitters and no treacle:
A drachm of real intelligence
And judgment *ad libitum*
(That's used as *aqua pura* is—
Give *quantum*, 'twont excite 'em!)
Truth, unsophisticated truth,
And, when the case is urgent,
Add home-thrusts, for they often prove
A wonderful detergent.
Shake well, ere doses you bestow,
'Tis Chlorodyne "Splendiferous"—
Then—give it to the Guardians? No!
Already they're somniferous!

SITTINGBOURNE.

A DANGEROUS DOG.—Mr. William Gibbs Gordelier, chemist, was summoned, at Sittingbourne, on October 21, for allowing a dangerous dog (a retriever) to be at large. The magistrates, after hearing the evidence, ordered the dog to be destroyed.

SOUTHAMPTON.

MUCH excitement was caused in this town on October 16 last by the report of the death by his own hand of Mr. George Dowman, a well-known chemist and a highly-respected inhabitant of the town. Mr. Dowman's character and usual behaviour were so well known that at first the report could not be credited, but it turned out too true, and it also appeared beyond doubt that the fatal act had been committed after a period of severe depression which had deprived the deceased of his reason. At an inquest held next day it appeared that he had dinner with his family at about 1:30 P.M., afterwards returning to his business. In the afternoon he went to his bedroom, and when the servant called him for tea the door was locked. Thinking he was asleep Mrs. Dowman waited some time, but becoming anxious Dr. Oliver was sent for, and no response being made to the

loudest knocks the door was at last broken open, and deceased was found kneeling by the side of the bed with a bottle of prussic acid in his hand. The assistants in the shop and the servants in the house deposed to the very marked depression Mr. Downan had suffered for some time previously, a condition brought about, it was believed, by too close application to his business. He had lately, it is stated, been studying a work on insanity. The jury found that deceased died by his own act while in an unsound state of mind.

Mr. Downan was a native of Colchester, and came to Southampton 35 years ago as assistant to the late Mr. W. M. Randall, with whom he lived for five years. He then commenced business for himself at 160 High Street, and was very successful. He was known publicly chiefly in connection with religious matters. He was for 23 years superintendent of a Congregational Sunday School in Southampton, the teachers of which evinced their respect for him by joining the funeral procession, 22 coaches and cabs carrying the mourners. Mr. Downan was 61 years of age.

STAMFORD.

CHEMISTS FINED UNDER THE PETROLEUM ACT.—At the Stamford Petty Sessions on October 5, Mr. G. Patterson, chemist and magistrate and alderman of the borough, and Mr. H. J. Stanford, his partner, were charged with having stored on their premises in Bourn Court, All Saints' parish, on October 2, from 250 to 300 gallons of petroleum, contrary to the provisions of the Petroleum Act. Mr. Stapleton appeared for the defendants, and admitted the charge. The Act of Parliament prohibits anyone from storing on premises within a certain distance of any dwelling-house more than three gallons of petroleum without a licence from the authorities, and the quantity allowed must be kept in iron drums or cans with taps. Anyone infringing the Act is liable to a penalty of 20*l.* for each day the law is violated. The defendants were licensed to store 50 gallons in their warehouse in Bourn Court, and they could not legally keep more than that quantity; but it appeared that from time to time, on the approach of winter, they had wilfully infringed their licence and stored from 200 to 300 gallons in the warehouse. Mrs. Blake and Mrs. Harrison, who live near, had frequently complained to Mr. Patterson (who was one of the magistrates that fixed the quantity of petroleum that persons should be allowed to store on their premises) and to Mr. Stanford, about the excessive quantity that was kept in the warehouse, and each of them promised that it should not occur again. On October 2, however, a trolly load of casks was taken to the warehouse. The neighbours again protested against so much being stored there, and as no notice was taken of it, they complained to Mr. Supt. Ward, who inspected the premises and found no less than 304 gallons of petroleum in casks, there not being a drum or can in which to store it. Some of it was tested in the presence of Mr. Heward, and instead of flashing (as required by the Act of Parliament) at 100 degs. Fahrenheit, it ignited at 65 degs. Fahrenheit, the atmospheric heat of that day. The defendants' excuse was that they were only waiting until they could procure a piece of land away from the town on which to build a proper store-house. Messrs. Patterson and Stanford were fined 10*l.*, and the petroleum and all the vessels in which it was stored were forfeited and sold, the defendants to pay all the costs of the proceedings.

WANDSWORTH.

FATAL EXPLOSION.—On October 29 a man named Samuel Smith was engaged in making some magenta dye at the Chemical Works, Wandsworth. While so doing the mass exploded, covering him with magenta dye, and burning him fearfully.

WOLVERHAMPTON.

MR. THEOPHILUS A. WEDGE, chemist and druggist, Bilston Road, Wolverhampton, is returned as Town Councillor for St. Matthew's Ward, Wolverhampton. Mr. W. Follows, chemist and druggist, Whitmore Reans, was candidate for St. Mark's ward, but was defeated by Mr. Anderson, a wine merchant.

THE PARIS EXHIBITION AWARDS.

SUBJOINED is the official list of awards made to British exhibitors in the classes named:—

CLASS 28.—PERFUMERY.

Atkinson, J. & E., 24 Old Bond Street, London....Gold medal
Cleaver, F. S., & Son, 32 Red Lion Street, London....Silver medal
Crown Perfumery Company, Bond Street, London....Bronze medal
Hodgson & Simpson, Walsfield....Hon. mention
Lewis, James, 6 Bartlett's Buildings, Holborn....Hon. mention
Osborne, Bauer & Cheeseman, 19 Golden Square, Regent Street....Hon. mention
Pears, A. & F., 91 Great Russell Street, London....Silver medal
Plesse & Lubin, 2 New Bond Street, London....Silver medal
Price, Napoleon, & Co., 27 Old Bond Street, London....Bronze medal
Rimmel, Eugène, 96 Strand, London....Silver medal
Rowland, A., & Sons, 20 Hatton Garden, London....Hon. mention
Yardley & Co., 7 Vine Street, Bloomsbury....Bronze medal

CLASS 47.—CHEMICAL AND PHARMACEUTICAL PRODUCTS.

Allen & Haubury....Silver medal
Atkinson & Co....Silver medal
Berger, Lewis, & Sons, Homerton, London, colours....Bronze medal
Bewley & Draper, 23 Mary Street, Dublin, aerated waters....Bronze medal
Blackwood & Co., 18 Broad Street Hill, London, inks....Silver medal
Boyd, Son & Co., 76 Sir John Rodger's Quay, Dublin, chemicals....Bronze medal
British and Foreign Mineral Water Company, 382 New City Road, Glasgow, artificial mineral waters....Hon. mention
Brooke, Simpson & Spiller, 50 Old Broad Street, London, colouring matters....Gold medal
Broomhead, George Emmet, 11 Union Place, Aberdeen, Coal liver oil emulsion with pepsine; pepsine wine....Hon. mention
Burgoyne, Burbridges, Cyriax & Farries, 16 Coleman Street, London, pure chemical and pharmaceutical products....Silver medal
Bush, W. J., & Co., Bishopsgate Street, London, essential oils and fruit essences....Silver medal
Cantrell & Cochrane, Nassau Works, Dublin, artificial aerated waters....Bronze medal
Chambers, James, & Co., 73 Great Tower Street, London, chemical products....Bronze medal
Colman, J. & J., 103 Cannon Street, London, washing blue....Bronze medal
Cook, Edward, Bow, London, pure soaps, &c....Gold medal
Corry, William, & Co., Cromac Street, Belfast, aerated waters....Bronze medal
Desoto Alkali Company, Widnes, Lancashire, caustic soda—soda crystals....Bronze medal
Dunn & Co., 31 Bouverie Street, London, lithographic ink....Bronze medal
Everett & Co., 51 Fetter Lane, London, blacking and varnish....Hon. mention
Evans, R., & Co., Wrexham, aerated waters....Hon. mention
Fleming, A. B., & Co., Caroline Park, Edinburgh, various inks....Bronze medal
Forster & Gregory, Chemical Works, Streatham Common, chemical products....Bronze medal
Gerrard, A. W., 153 Liverpool Road, London, pharmaceutical products....Hon. mention
Gidney, Clark & Co., West Ham Abbey, Stratford, varnishes....Bronze medal
Glover, Henry, Son & Co., Leeds Road, Bradford, dry soap....Bronze medal
Golding, Davis & Co., Alkali Works, Widnes, chemical products....Bronze medal
Griffiths, Fletcher & Berdoe, 33 Seel Street, Liverpool, colours....Silver medal
Green, John, 12 Graham Terrace, Ridley Road, Kingsland, gelatine....Bronze medal
Hemingway, S., & Co., Bradford, Yorkshire, dry soap....Bronze medal
Hodgson & Simpson, Calder Soap Works, Wakefield, soaps....Gold medal
Hudson, Robert Spear, Royal Chemical Works, West Bromwich, extract of soap and soap in powder....Silver medal
Hutlet and Campsie Alum Company, 115 Wellington Street, Glasgow, prussiate of potash....Silver medal
Human Brothers, Flrth Street, Huddersfield, artificial mineral waters....Hon. mention
James, Edward, & Son, Sutton Road, Plymouth, washing blue and black lead....Hon. mention
Jarratt Brothers, Manchester Road, Bradford, dry soap....Hon. mention
Jeunings, Thomas, Chemical Works, Cork, magnesia....Bronze medal
Jenson & Nicholson, 65 Goswell Road, London, varnishes....Hon. mention
Kirby, H. & T., & Co., 14 Newman Street, Oxford Street, London, pharmaceutical preparations....Bronze medal

anghorne Chemical Works, Stratford, London, chemical products....
 Hon. mention
 Beech & Neal, City Road, Derby, colours....Hon. mention
 Binstein, L. J., & Sons, 17 Railway Approach, London Bridge, London,
 artificial colouring matters....Silver medal
 Liver Alkali Works Company, Lightbody Street, Liverpool, caustic soda....
 Bronze medal
 Lowe, Charles, & Co., 61 Piccadilly, Manchester, products from coal tar.
 Carbolic acid and its derivatives....Gold medal
 Lyon, W., 19 Park Street, Ducie Bridge, Manchester, inks....Bronze medal
 Macfarlane, J. F., & Co., 5 Bargo Yard, Bucklersbury, preparations from
 opium, beberine salicin....Silver medal
 MacIntosh, C., & Co., 19 St. Bridge Street, Ludgate Circus, London, india-
 rubber....Gold medal
 Mackay, John, & Co., Canning Street, Edinburgh, varnishes....Hon.
 mention
 Maclear, James, St. Rollox Chemical Works, Glasgow, chemical apparatus,
 products and preparations....Silver medal
 Mander Bros., 17 Gracechurch Street, London, varnishes....Silver medal
 Morson, Thomas, & Son, Southampton Row, Russell Square, London,
 chemical and pharmaceutical products....Silver medal
 North British Chemical Company, 149 Hope Street, Glasgow, iodine,
 bromine, and derivatives....Silver medal
 Oakbank Oil Company, 128 Ingram Street, Glasgow, shale and its products
Hon. mention
 Price's Patent Candles Company (Limited), Belmont Works, Battersea,
 candles, stearine, paraffin, soaps, glycerine, lubricating materials, and
 fatty acids....Gold medal
 Read Brothers, 62 Victoria Street, Wolverhampton, varnishes and japan
Hon. mention
 Readman, James Burgess, Buchanan Street, Glasgow, chemical products,
 phosphorus....Bronze medal
 Richardson, John, 10 Friar Lane, Leicester, chemical and pharmaceutical
 products....Bronze medal
 Robinson & Anderson, Mack Road, Bermondsey, whitelead....Hon.
 mention
 Rolls, Schweizer & Co., 28 Poole Street, London, varnishes....Bronze
 medal
 Rose, Sir, W. A., & Co., 66 Upper Thames Street, London, oils, greases....
 Hon. mention
 St. Bede Chemical Company, 1 St. Nicholas Buildings, Newcastle-on-Tyne,
 manufacture of soda....Hon. mention
 Runcorn Soap & Alkali Company, 6 Water Street, Liverpool, bleaching
 powder, soda ash, soda crystals, caustic soda, sulphate of soda, refined
 rosin....Silver medal
 Savory & Moore, New Bond Street, London, chemical products and prepara-
 tions....Silver medal
 Schweppe, J., & Co., 51 Berners Street, London, aerated waters....Silver
 medal
 Shaw, Henry, & Co., Dukinfield, Manchester, dry soap....Bronze medal
 Silicate Paint Company, 30 Seel Street, Liverpool, colours....Bronze medal
 Simpsons, Payne & Co., Chemical Works, Millwall, London, paraffin,
 stearine, and composite candles, and pure glycerine....Silver medal
 Smith, T. & H., & Co., 21 Duke Street, Edinburgh, alkaloids....Gold medal
 Southall Brothers & Barclay, Birmingham, pharmaceutical products....
 Bronze medal
 Spence, Peter, Pendleton Alum Works, Manchester, alum and aluminiferous
 cake....Gold medal
 Stephens, H. C., 171 Aldersgate Street, London, inks....Bronze medal
 Tennant, Charles, & Co., St. Rollox, Glasgow, chemical products....Gold
 medal
 Turner, C., & Son, Broad Street, Bloomsbury, London, varnishes of all
 kinds, colours, gums, turpentine....Silver medal
 Tyne Alkali Company, 1 Dean Street, Newcastle-on-Tyne, chemical pro-
 ducts....Bronze medal
 Washington Chemical Company, Newcastle-on-Tyne, carbonate of magnes-
 ia....Bronze medal
 Wilkinson, Heywood & Clark, Battle Bridge, King's Cross, London,
 varnishes and colours....Gold medal
 Williams, Thomas, & Dower, Star Chemical Works, Bradford, artificial
 colouring matters....Gold medal
 Wilson & Co., Jubilee Street, Mile End, London, colours....Bronze medal
 Yorkshire Varnish Company, 39 Upper Thames Street, London, varnishes
Hon. mention
 Young's Paraffin Light and Mineral Oil Company (Limited), 13 Dundas
 Street, Glasgow, oils, essences, paraffin, candles....Gold medal

Among the awards in the other sections may be named
 two Grand Prix to Messrs. Johnson, Matthey & Co., one for
 platina and one for chemical refining machinery. This firm
 and Sir Joseph Whitworth & Co. are the only ones to whom
 more than a single *grand prix* was awarded. Another Grand
 Prix was given to Messrs. Huntley & Palmer for biscuits.
 The Patent Plumbago Crucible Company take gold, silver,
 and bronze medals for their several products. Messrs. Bagley,

Wild & Co., E. Brevitt & Co., and Kilner Brothers, each
 receive a silver medal for bottles; Messrs. Hayward Tyler
 & Co. take a gold medal for aerated-water machinery; Peak,
 Frean & Co. take a gold medal for biscuits; Spratt's Company
 take a silver medal for dog biscuits; Barnett, Son & Foster,
 and H. Codd & Co., a silver medal each for aerated-water
 machinery; Messrs. Gerant & Co. a bronze medal for aerated
 water machinery; Mr. Hickisson (Bond) and Mr. Mather,
 honourable mention for marking ink.

FORMULÆ OF SECRET MEDICINES.

(Continued.)

*The Formulæ given below are translated (by special permission
 of the author) from a German collection compiled by Mr.
 Edward Hahn, Apotheker. The names following most of
 the Formulæ are those of the authorities quoted for the
 analysis. The weights are almost invariably given in
 metric denominations. A gramme is equivalent to
 15½ grains. The prices quoted are the nearest English
 equivalents to the original retail price.*

HAARBALSAM (Dr. Wackerson, London).—05 gramme car-
 mine, 6 gramme colocynth extract, 15 drops tincture cantha-
 rides, 10 drops balsam of Peru triturated with a little spirit, and
 mixed with 50 grammes ordinary pomade. 3s.—Hager.

HAARBALSAM, VEGETABILISCHER (A. Marquart, Leipsic).—
 This preparation has changed from its vegetable chrysalis to
 water, 42 grammes; eau de Cologne, 6 grammes; glycerine,
 24 grammes; sugar of lead, 1.8 gramme. 2s.

**HAAR-CONSERVIRUNGS-POMADE—POMADE FOR PRESERVING
 THE HAIR** (Dr. John Brown, Vienna).—50 grammes pomade,
 coloured black with 4 grammes pyrogallie acid, and 10 drops
 liquor potassæ. 4s.—Schädler.

**HAAR-ERNÄHRUNGSMITTEL—PREPARATION FOR NOURISHING
 THE HAIR** (Professor M. Langenbeck, Hanover).—For nourish-
 ing the unhealthy roots and preventing the falling-off of the
 hair. Fine raspings of horn are softened in boiling water, dis-
 solved in dilute caustic potash solution, and precipitated from
 the alkaline solution by sulphuric or hydrochloric acid. One
 part of this precipitate is dissolved by frequent shaking in 4.5
 parts caustic potash and 160 parts water, and the solution is
 filtered. 80 grammes, 3s. 6d.—Hager.

HAARERZEUGUNG—HAIR PRODUCER (Morny).—Remedy for
 diseases of the hair, or complete preventive of scurf, of the
 hair falling out, turning grey, of baldness and its accompani-
 ments, such as giddiness, migraine, and perspiration of
 the scalp. It consists of a hair essence and a hair oil. The
 hair essence is 95 grammes of a brownish-yellow fluid. Its
 analysis gives 55 gramme anhydrous acetic acid, 1 gramme
 spirit, and 368 gramme extractive matter, consisting chiefly
 of dextrin and glucose. The essence is probably the wort of pale
 ale or dried malt, mixed with vinegar, boiled, perfumed with
 eau de Cologne, and filtered. 6s.—Hager.

HAARESENZ (Moras).—20 parts castor oil, 80 parts alcohol,
 a little balsam of Peru, oil of thyme, oil of lavender, and tinct.
 cinchona.—Raspe.

VEGETABLE HAIR DYE (Dr. Leopold Beringuier, Physician,
 Berlin. Made by Raymond & Co., 27 Oranienburger Strasse,
 Berlin).—Flask 1 contains a dilute solution of iron chloride in
 water; flask 2, a solution of pyrogallie acid in eau de Cologne.—
 Trojan.

HAIR DYE POWDER has various compositions; as, slaked lime
 15 parts, red lead 1 part; or, slaked lime 4 parts, red lead
 1 part; or, slaked lime and litharge or white lead, equal parts;
 or, slaked lime and white lead, of each 2 parts, talc 1 part.—
 Wittstein.

HAIR DYE TINCTURE FOR BLACKENING GREY HAIR.—An
 alcoholic extract of green walnut shells, perfumed with an
 ethereal oil, perhaps lavender. 30 grammes, 2s.—Brandes.

HAIR DYE TINCTURE (A. E. Royer, Berlin).—Decoction of
 oak bark mixed with a little soda. 150 grammes, 1s. 6d.—
 Schädler.

HAIR DYE WATER (M. Richter, Berlin), for blackening grey
 hair.—Sugar of lead, 14.5 grammes; glycerine, 45 grammes;
 water, 18 grammes; spirit, 20 grammes. 3s.—Hager.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

OFFICE—Colonial Buildings, 44a Cannon Street, London.

THE CHEMISTS' & DRUGGISTS' DIARY, 1879.

This work is just published, but for the present only the foreign edition is ready. A supply has been forwarded to Australia by last mail, and as soon as the foreign circulation is completed we shall commence the distribution of inland copies. Subscribers may expect to receive copies within about ten days. As far as possible the Diaries will be delivered through Sutton's agency; where this is not practicable we shall forward by post, but subscribers who will kindly write to us at once and name a wholesale firm in the City to whom we can send the parcel for enclosure will be sure to receive the book in better condition.

In case of any demand or charge for delivery on the part of Sutton's agents, subscribers will please take a receipt and forward the same to us, when the money paid will be refunded.

The Diary is much increased and improved, is provided with a pocket for loose papers, and a registering ribbon. It contains a valuable treatise on Perfumery, with formulae, and much other useful matter. Extra copies can be had by subscribers, at 2s. 6d. each, and should be ordered at once.

RENDALL'S THEOBROMINE, OR CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1s., 2s., 3s. 9d., and 7s. 6d. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,
28 QUEEN STREET, EXETER.

Chief Wholesale Agents—

SANGER & SONS, 150 OXFORD STREET, W.

HAWKER'S JUJUBES.

See page 5.

SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 97.

METZ'S WILLOW BOXES.

See page 30.

All Chemists are invited to apply for a Copy of our Wholesale Price List of HOMŒOPATHIC MEDICINES,

Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. BUTCHER & CO., Wholesale and Export Homœopathic Chemists, Spencer Place, Blackheath, London, S.E.

IMPORTANT TO CHEMISTS, SODA WATER MANUFACTURERS, AND OTHERS.

Removal of Lead from Water.

THE SILICATED CARBON FILTER

Entirely removes Lead from Water, thus meeting the complaints that arise from time to time as to the presence of Lead in Aërated Waters.

For confirmation of this assertion, see the opinions of such authorities as Dr. BARTLETT, Professor WANKLYN, and others, at page 74, December, 1876.

REDUCTION IN PRICES.

GENERAL MINERAL WATERS DEPÔT
27 MARGARET STREET, REGENT STREET,
LONDON.

PURE COD LIVER OIL. See page 81.

HOMŒOPATHIC MEDICINES.

E. GOULD & SON,

*Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists,*

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

"Macniven & Cameron's Pens are the best."—*Public Opinion.*

"They come as a boon and a blessing to men,
The Pickwick, the Owl, and the Waverley Pen."

6d. and 1s. per Box.

At all Stationers.

"They are a treasure."—*Standard.*

Specimen Box, containing all the kinds, 1s. 1d. by post.

Patentees: MACNIVEN & CAMERON, 23 to 33 Blair Street, Edinburgh. Established 1770.

Pen Makers to Her Majesty's Government Offices.

Special Notice.

Reduction in Price.

PETER MUMFORD & SON'S

PURE CRUSHED LINSEED.

Prize Medals:
LONDON, 1873.
PARIS, 1875.

20/NET

In consequence of the trouble caused by the return of empties we have included them in price.

Per cwt., Bag included; or 21/ in one-cwt. Casks. Empties not returnable. 2s. per cwt. extra for smaller quantities.

BEST QUALITY. NO OIL EXTRACTED.

Ground so as to retain the natural colour of the seed without being heated.

Special quotations for Larger Quantities, Samples, Reports, and Analyses, on application, post free.

Newcastle Granary and Steam Mills, Farringdon Road, LONDON, E.C.

UNGUENTUM PETROLEI.

See page 91.

ELLIMAN'S EMBROCACTION.

See page 40.

EDITORIAL NOTES.

COUNTER PRACTICE.

NONE can more heartily than ourselves congratulate the Chemists and Druggists' Trade Association on their recent triumph in the Court of Exchequer. No victory was ever better deserved. It has been won after a campaign of unusual discouragements, and after an amount of unseen labour which can only be appreciated by the few who have been intimately acquainted with every stage of the proceedings. It is only bare honesty to credit the solicitor and the secretary of the Association with the honour which their patient and thorough preparation of the defence in this action most richly merits. The Executive Committee, too, have well earned our gratitude by their courageous

determination to spare no expense in the effort to present their case to the Court in the best possible manner; and this determination, be it remembered, has been maintained in the face of a running fire of ungenerous criticism, not from their legal opponents—they never despised the Trade Association—but from the upper Olympian spheres, where pharmaceutical wisdom has long been supposed to sit enthroned. “Verdict for the defendant with costs; I don’t see what you want better than that,” said Baron Pollock to Sir Henry James, when the latter asked on which ground of defence the jury had founded their decision. Very satisfactory, no doubt, as far as it goes, but as we shall presently have to show, the trade must not, cannot, rest here. This trial, and others of a similar nature which have preceded it, have taught us several important lessons which it would be the maddest of policies to ignore.

The following was written during the trial, and appears in the *Student’s Journal*—a publication conducted, if we are not mistaken, by the founder of the Medical Defence Association:—

Fortunately for the defendant, Shepperley, the case against him has been badly got up, there being scarcely any evidence of his having prescribed. If, as is very likely, the defendant gains a verdict, the chemists will imagine that they have established their right to prescribe medicines, but further litigation, with better management, will doubtless undeceive them.

This is perfectly true. Anyone who studies our report of the arguments will perceive that the verdict was due, to a large extent, to the extraordinary weakness of the plaintiffs’ case. And the paragraph we have quoted shows that there is no probability that our opponents will let the question rest where it is. The trial just concluded has shown them in their true colours. The scathing sarcasms levelled at them by Sir Henry James will probably make some of them wince, and the evident antipathy of the public to their proceedings, as evidenced by the verdict as well as by the articles which we quote from some of our most popular journals, ought to teach them what will be the ultimate result of the contest which they have provoked; but balanced against these they have the judicial opinion of Baron Pollock, and it would be idle to deny or to ignore the weight of his interpretation of the law. We cannot doubt that they will make the most of his judgment, and it would not we imagine be hard to prove that, according to his opinion, there is hardly a day passes on which ninety-nine chemists out of every hundred do not render themselves liable to a 20*l.* penalty by “acting as apothecaries.” This is a most serious matter; but the more widely it is proclaimed to the trade and to the public the more swiftly and surely it will be altered. On the strength of that judicial expression of opinion, the apothecaries can greatly harass pharmacutists. This is patent; but almost as certain is it that by so doing they will clear the way for a revision of the law vastly to their own disadvantage.

To get a clear apprehension of the present legal position of chemists and druggists in reference to counter prescribing, let us take the briefest possible retrospect of the judicial utterances on the point during the last few years.

According to Baron Bramwell (CHEMIST AND DRUGGIST, February 15, 1876) “if a man entered a chemist’s shop and asked for something to cure a bad headache, and the chemist gave him a draught, without doubt the chemist would technically infringe the terms of the Act.” Later (see CHEMIST AND DRUGGIST, December 15, 1877) in the appeal to the Court of Exchequer on the case just settled the Lord Chief Baron and Mr. Baron Cleasby ordered a new trial for the reason stated by the last-named learned judge in these words:—“It is transparent that there are four

branches in the medical profession, namely, physicians, surgeons, apothecaries, and chemists. You will find it is laid down so. Well, in considering what they claim to be entitled to after the Act of 1815, I cannot help referring to Section 28 of this Act, which recognises the chemists as a branch of the profession, and reserves to them all the rights which they were in the habit of exercising rightly or wrongly before 1815.” And again:—“If you show by going back to the practice for years past that chemists have been in the habit of dispensing across the counter you must give all the evidence which you can as to what now is, and has been for a considerable time past, the business of a chemist and druggist.” The Lord Chief Baron on the same occasion seemed to coincide generally with Baron Cleasby’s view. According to them the question turned on Section 28 of the Act, and was to be decided according to the evidence which might be brought forward as to the custom of the trade previous to the year 1815. In the case of the Society of Apothecaries v. Wiggins, tried last May, Mr. Justice Field evidently took a somewhat similar view. The question he put to the jury was whether the diseases which the defendant had treated were complaints of the character which it had been the practice of chemists and druggists to treat previous to 1815. Even Mr. Morgan Howard, the counsel for the plaintiffs in the same case, said “the question substantially appeared to be whether these were simple complaints.” The jury in that case concluded that Wiggins had exceeded the privileges which the Apothecaries Act reserved to chemists, and they consequently gave a verdict against him. But if the same question had been put to the jury in the recent trial, there could have been no hesitation whatever in answering it in favour of the defendant.

But Baron Pollock interprets the Apothecaries Act in much severer fashion. According to him the custom of the trade previous to 1815 in respect to advising customers in simple diseases is quite beside the question. The privileges of the trade reserved by the 28th section of the Apothecaries Act are limited to the acts of “buying, preparing, compounding, dispensing, and vending drugs, medicine, and medicinal compounds;” and when the Act says that those who carry on the business of a chemist and druggist may do so “as fully and amply to all intents and purposes as the same trade or business was carried on before the passing of the Act,” it means only in those particulars previously recited. Baron Pollock says in substance, a chemist and druggist may, without infringing the Act, enter into conversation with his customer respecting the medicines which the latter proposes to buy; but if he applies his knowledge and discretion to the selection of a medicine for a particular case brought before him, and supplies such medicine to his customer, he is thereby practising as an apothecary. It is, he declares, quite immaterial whether the case so treated is a simple or a serious one; it is impossible to define in a legal sense what is simple and what is serious; besides, the Act says nothing about either. It is, too, quite immaterial whether charge be made for advice or not. The simple question which he left the jury to decide was: Did Mr. Shepperley, in the cases referred to in the evidence, act as an apothecary by advising or selecting medicines suitable to those cases? The evidence brought before the jury by the prosecutors was meagre in quantity and very inferior in quality, and the jury could have little hesitation in finding the charges not proven. But what no one who studies Baron Pollock’s summing-up can doubt is that he substantially agrees with the judgment of Baron Bramwell, and interprets the law in almost exact accordance with the views put forward by the Medical Defence Association. The latter body could hardly have desired a more definite or favourable exposition of the Apothecaries Act,

though it is some satisfaction to us that they will have to pay pretty smartly for it.

It is the truest courage and the best policy to look an ugly situation square in the face. But the present position of affairs is not by any means without a bright side. Suppose we accept the fact that the law is against us. There is good evidence that the common sense of our fellow-countrymen is in our favour. We print elsewhere articles from two of the leading London, and extracts from some of the provincial, daily journals commenting on this case, and expressing as strongly as we could desire the determination of the public not to be robbed of the convenient resort of a chemist's shop for trifling ailments merely for the benefit of some grasping doctors. Even the judges have felt themselves constrained in every case where they have delivered an opinion to apologise for it, and it is well known that there are eminent Members of Parliament quite ready to give their support to a moderate and well-considered proposal to secure for chemists the rights which public convenience demands, and which ordinary citizenship confers. We urge upon the Executive Committee of the Trade Association the paramount duty of immediately preparing for submission to Parliament some Bill which shall prevent future litigation on this point, and we cannot too strongly press upon the trade the necessity of uniting cordially in mutual defence, and in support of the claims which must be fought for now or abandoned for ever.

A NEW ERA IN CHEMISTRY.

It seems probable that we are on the eve of some new revelations in chemical science, which may cause a greater revolution in the principles of that science than any observations since the days of Lavoisier. No chemist who has followed the researches of the past 20 years has failed to question at least in his own mind the strict simplicity of what are called the elementary bodies. The marvellous transformations which the study of organic chemistry has disclosed, the allotropic conditions to which many, and perhaps with a wider range of knowledge we might say all the elements are liable, the regular progressive series in which the atomic weights of certain groups can be classed with a similarly corresponding relation of properties, a consideration which enabled Mendeljeff to predict the discovery and the characteristics of gallium, these and other facts have circumstantially indicated the compound nature of many, if not of most of those bodies which it has hitherto been convenient and indeed necessary to regard as elements. The wonderfully delicate spectrum analysis has long been looked forward to as the probable path whereby further researches in this direction should be pursued, and it appears that this process has now yielded some results of the nature suggested. At the meeting of the Paris Academy of Sciences last week, a note was read from Mr. Norman Lockyer, F.R.S., stating that he believes he has succeeded in proving that many of the so-called chemical elements are in reality not elementary at all, but compound bodies. M. Dumas, the accomplished French chemist, added that the conclusion reached by Mr. Lockyer is the result of three years' assiduous research, in which he has compared with the greatest care the spectra of the chemical elements with the spectra of the sun and other luminous celestial bodies. Mr. Lockyer announces that he will send photographs and other details necessary to convince the Academy, which, as he says, "will desire proofs" of a conclusion so extraordinary. We understand that a paper on the subject will be read by Mr. Lockyer at an early meeting of the Royal Society.

A VEGETABLE BROBDINGNAG.

At the last meeting of the Linnæan Society, held on November 7, Dr. Masters read an extract from a letter received that morning, describing what is believed to be the largest plant in existence. A botanical traveller in Sumatra has found growing near the Rafflesia, a plant belonging to the family of the Arums. The bulb or corm growing on the surface measured 5 feet in circumference. Two men endeavoured to raise it; it is said they nearly broke their backs in doing it, and the root itself broke while they were lifting it. From this corm sprang a single leaf stalk 20 feet high. At the top it divided into three branches, each as thick as a man's thigh. The leaf is divided into an immense number of segments, and measures 15 metres in circumference, or 45 feet, covering, therefore, an area of 150 square feet. The plant had done flowering when it was discovered, so that the dimensions of the spathe are as yet unknown. But seeds were obtained, which are now growing at Florence.

THE COMING PHARMACOPŒIA.

At a meeting of the Liverpool Chemists' Association on October 24 Dr. Charles Symes read a capital paper, entitled, "Suggestions for a New Edition of the British Pharmacopœia." He laid before his hearers just the materials required to form a clear and intelligent idea of the character, the authority, and defects of the present edition, and, in the suggestions he made, prepared them to regard any additions which may be made to it from an advantageous point of view. Dr. Symes is thoroughly orthodox; that is, he agrees with us, or we agree with him, in every point, and what could be better proof of orthodoxy? The principal points of his paper may be briefly summarised.

Pharmacy and medicine are both advancing with such rapid strides that the authority of a Pharmacopœia reaches maturity and begins to decay in much less than the ten years to which its life is at present considered to extend. If the Pharmacopœia is to maintain its scientific authority and practical usefulness, it should be revised at much shorter intervals. The present one has already been in existence 11½ years, and if a new one is to be issued in 1880 it is time to begin the work of revision.

The Pharmacopœia, while it is a guide and help to the physician, is a law to the pharmacist. It is part of the English constitution that all whom the law affects should have a hand in its enactment. Pharmacists should, therefore, be admitted to the Pharmacopœia Committee of the Medical Council, not merely as subordinates, but as equals both in numbers and authority. This is already the case on the Continent and in America. In choosing the committee care should be taken to include medical practitioners engaged in active every-day practice and pharmacists engaged at the present time in the practical work of the pharmacy. Scientific physicians and pharmacists are required to give the Pharmacopœia scientific authority, practitioners of both classes to give it practical worth.

The chemical nomenclature should be revised as suggested by Attfield. Potash, soda, and lithia salts should be uniformly replaced by potassium, sodium, and lithium, with other names to correspond.

It would, perhaps, be the best plan to express quantities by parts—solids by weight, and liquids by measure—as in Squire's "Companion." Here we would remark that though this is undoubtedly the best plan for present adoption, it seems equally certain that pharmaceutical opinion will, in the more or less distant future, demand that all drugs, liquid or solid, shall be estimated by weight only in

the preparation of medicines. There would be great inconvenience in the immediate adoption of this method, but its superior accuracy is sure to lead to its general use.

The posology fairly well indicates the average adult dose used in general practice, and does not seem to demand alteration.

Dr. Symes suggested improvements or corrections in the following articles:—Fine and coarse powders; *Acidulphurosum* and *Nitrohydrochloricum dilutum*; *Liquores magnesiae carbonatis*, and *epispasticus*; *Extracta ergotae liquidum* and *Cinchonae flavae liquidum*; *Linimenta terebinthinæ aceticum*, and *saponis*; *Suppositoria*; *Unguentum belladonnæ*; *Injectio morphiæ hypodermica*; *Oleum phosphoratum*; *Pulvis glycyrrhizæ compositus*; *Pilula phosphori*, and *unctura aurantii recentis*.

He would include in the revised edition the following new remedies:—*Gelsemium sempervirens* and *Tinct. gelsemii*; *Ext. belladonnæ alcoholicum*; *Butyl chloral*; *Iodoform*; *Acids chrysophanie*, *hydrobromic*, *boracic*, and *salicylic*; *Hydrargyri oleas*; *Decoet. cinchonæ acidum*; *Vaselin*, *Unguentum petrolei* or *Ozokerin*; *Ferrum dialysatum*; *Syrup of hypophosphites*; *Salicin*; *Rhamnus frangula* and *Decoetum rhamni frang.*; *Tinct. colocynthidis*; *Sodii salicylas*; *Eucalyptus globulus* and *E. rostrata*; *Syr. ferri phosph. co.*, and *Syrupus ferri et quiniæ et strychniæ phosph.*

THE WEIGHTS AND MEASURES ACT.

THE following paragraph is extracted from an official letter published apparently in reply to the criticisms which have been made in various quarters respecting the above piece of legislation:—

"It may be worth while to observe that the offence mentioned in Clause 23 does not consist in quoting a weight or measure unknown to the law, but in quoting a weight or measure known to and determined by the law, with a meaning different from that given to it by the law. Thus the 'load' and 'coomb' are not denominations of measure set forth in the Act, and the use of such terms is not affected by this clause. Such denominations, however, as the 'bushel' and 'quart' are set forth in the Act, and it is therefore illegal to quote or refer to any measure as a bushel or a quart unless they are of a capacity attached to these denominations by the Act."

Some question has been raised as to the legality of in future selling wine or other such liquids in the usual size bottles. Such sales will not be illegal, and the only way they will be affected will be that the old-fashioned bottles may no longer be described as pints or quarts.

Several other clauses of the Act are rather obscure in meaning or even apparently contradictory to other sections. Thus, by Clause 38, the Board of Trade are empowered to verify all metric weights and measures which are submitted to them for the purpose, and which the Board of Trade are satisfied are intended to be used for the purpose of science or of manufacture, or for any lawful purpose not being for the purpose of trade within the meaning of this Act. Trade, according to Clause 19, is every contract, bargain, sale, dealing, and collection of tolls and duties. Clause 19 also declares that every contract, bargain, sale, or dealing made or had in the United Kingdom shall be deemed to be made or had according to one of the imperial weights or measures, and if not so made or had shall be void.

These two passages seem to make it illegal to use for trade purposes in Great Britain the metric weights and measures, which are certainly not imperial measures. On the other hand, Clause 21 enacts that a contract or dealing shall not be invalid or open to objection, on the ground that the

weights and measures expressed or referred to therein are weights or measures of the metric system, and Clause 18 legalises the use of the table of metric equivalents printed in the Act "for the purpose of computing and expressing in weights and measures weights and measures of the metric system." We submitted to the Board of Trade the question: Will it be lawful on and after January 1, 1879, to sell in England 1 kilogram of cheese, or must it be sold as 2 lbs., 3 ozs., and 4 drachms? The answer we received from the Department recapitulated the passage just quoted from Section 21, and then said, "A sale, therefore, of a kilogram of cheese appears to be made legal by this clause." At the same time the Board of Trade disclaims any power to place an authoritative interpretation on the Act.

The present position of the metric system seems in the eye of the law to be this. Tradesmen may buy and sell by metric weights and measures (Clause 21); they will be fined 5*l.* for every weight they possess or use which is not verified and stamped by an inspector with a stamp of verification (Clause 29), and the Board of Trade may verify all metric weights and measures provided they are *not for use in trade* (Clause 38). We do not learn from the Act that inspectors have any powers given them to verify weights independently or in opposition to the Board of Trade.

Clause 20 allows drugs when retailed to be sold by apothecaries' weight. Clause 23 makes it illegal to use the apothecaries' dram in price lists, price currents, journals, &c., for the only dram legalised in the Act is the avoirdupoise dram or the sixteenth part of an ounce, or 27,343 grains.

We, therefore, wrote to the Board of Trade, asking if it would be legal for a wholesale druggist to sell or quote a price for an apothecaries' dram of aconitine and similar articles. The answer was that Clause 20, as just quoted, applies simply to drugs sold by retail, and the case we put seems to be governed by Clause 23.

Wholesale druggists, therefore, must not in future quote aconitine or any similar article by the apothecaries' dram.

EXHIBITION OF AËRATED WATER MACHINERY.

THE seventh annual exhibition of machinery and appliances used in the manufacture of aërated waters was opened on Tuesday, October 22, in the Lower Berner's Hall, Agricultural Hall, Islington. The exhibits were divided into twelve classes, and included soda-water machinery, steam and gas engines, patent stoppered bottles, syphons and filling machines, English and foreign corks, water filters, &c. The exhibition remained open until the 24th, and each day there was a large attendance of interested persons, admission being free. The whole of the arrangements were, as usual, under the direction of Mr. E. M. Adams, the originator and manager of these exhibitions. Some of the leading exhibits are described below.

Messrs. Barnett, Son & Foster, of Forston Street, Hoxton, N., showed a number of machines, but they directed particular attention to their glass plungers, the object of which is to save friction, and to avoid the contamination which a metal plunger is liable to cause. Their copper cylinders and pumps were also conspicuous; and their improved gas generators attracted considerable attention. These generators have the advantage of being worked either by hand or steam. In the patent rack syrup pump shown the barrel is made of glass, the obvious advantage being that the operator can see that a full charge is regularly carried into the bottle; the plunger is also made of vulcanite, which is impervious to acids, and the valve-box and valves are coated with silver, the risk of verdigris being thus avoided. Syphon bottles, soda-water machines, and machinery for filling various kinds of patent stoppered bottles, were also on view at this stand.

Messrs. Hayward Tyler & Co., engineers, of Upper Whitecross Street, E.C., exhibited a variety of their machinery. Besides a complete outfit for an aerated water manufactory this firm exhibited a new bottle washer and a gas-purifying apparatus. The washer is fitted with Wilson's patent partitioned wheel for soaking bottles, and is extremely useful in facilitating the work of washing. The dirty bottles are placed in a wooden rack in the form of a wheel, the weight of the bottles carrying them down into the water as the others are removed, so that the wheel is kept slowly revolving. After being thoroughly soaked in this way, the bottles are taken out on the other side and brushed and rinsed. It is claimed by the makers that one washer and a lad to supply empties to the wheel can soak, brush, rinse, and take off fifty dozen an hour easily. The gas purifier is for purifying the gas before it passes into the gasholder. The gas enters the water at the bottom of the vessel, and in its upward course is broken up into a constant succession of minute bubbles, so that no part escapes without being washed. On arrival at the surface of the water it passes off through a pipe of pure tin to the gasholder. Some of these washers have two vessels, the gas passing through an alkaline solution, with which one is filled, before it enters the water in the other, as already described.

Mr. E. S. Hindley, of Bourton, Dorset, showed some vertical engines of $1\frac{1}{2}$ and 2 horse power, specially adapted for soda-water work, combining the essentials of compactness, cheapness, strength, and simplicity of construction. Amongst the improvements in these engines have been the fitting of them with a quick-speed equilibrium governor, having an arrangement for attaining any ordinary speed with great uniformity. The reversing of the motion is easily and quickly effected, and there is an entire absence of vibration.

French machinery was represented by Mondolot's apparatus one which has gained a gold medal at the Exhibition. This was shown by the London agents, Messrs. Frignot & Co., Little James Street, Bedford Row.

A very prominent display of machinery was made by Mr. N. G. Wilcocks, of Bath. This maker had a double show, one outside the hall, of carts and vans especially suitable to the mineral water trade, and a fine display of machinery within. The mineral water machinery, and all its accessories, turned out by this firm are of the soundest character, and our inquiries as to prices gave us a very favourable impression of the value for money, which a purchaser may expect in transactions with Mr. Wilcocks.

The exhibit of Messrs. Dows, Clark & Co. was a very handsome and interesting one. This firm manufactures machinery constructed on what is known as the American system. It would be impossible, in our space, to discuss the relative merits of the different systems. We can only here remark on the compactness of a complete set of machinery, as displayed at Messrs. Dows & Clark's stand, and the finished style which all parts presented. This stand included a number of the accessories to the trade for which the firm has become noted, such as ornamental counter and cabinet apparatus, tumbler holders, fruit syrups, and flavouring extracts, a "gum extract" for producing a creamy froth, and other specialties. A syrup measuring vessel, on a new principle, was one of the prettiest novelties at the show. A graduated air-tube, let into the top of the vessel, can be drawn up or pushed down to any point, and the syrup or other liquid entering will rise to the bottom of the tube but no higher, and can then be drawn off. Such a system might be adopted with great convenience to the measuring of oils.

Messrs. Davenport & Co., of Holborn, who act as general machinery agents, had a capital show. This firm also owns the "Hornor's patent" nozzle and stopper, a method which can be applied to ordinary soda-water bottles.

The British Syphon Manufactory exhibited samples of syphons and seltzogenes made in London. These were worthy of the highest praise for their good workmanship and brilliant appearance.

Messrs. Codd & Co., Barrett & Elers, and other firms were showing patent bottles. Messrs. Kilner Bros. had a fine display of bottles; Mr. Hay, of Hull, showed samples of his concentrated soluble essence of ginger; Messrs. Evans, Sons & Co., of Liverpool, brought forward the Montserrat Lime Juice, and Messrs. W. J. Bush & Co. had a stand on which were grouped specimens of the

chemicals, fruit essences, and colouring matters used by the trade.

There were many other exhibitors, but those we have named will give a general idea of the character of the exhibition, which seems now to have become a permanently annual affair, and which is certainly most useful, and seems to be highly appreciated by those engaged in the aerated water business.

THE ANNUAL MEETING

of the Mineral Water Trade Association was held on the first day of the exhibition, and was largely attended by ladies as well as gentlemen. The President, Mr. Charles Mumby, of Gosport, was in the chair, and pushed the business through with a good deal of vigour. The chief subject of discussion was the successful result of a trial in which a trade mark right in bottles of a Manchester firm had been established. The junior counsel in the case, Mr. Willis Bund, gave an account of the trial from a legal point of view. In the evening a dinner was held, which was attended by nearly 300 ladies and gentlemen.

DIGESTION.

BY MR. C. B. MILLER.

(A Paper read before the Chemists' Assistants' Association, August 7, 1878.)

DIGESTION is the process by which the materials of our food are so changed as to be made fit for absorption into the blood. The term "alimentation" is often used, because all these changes take place in some part of the alimentary canal. The alimentary canal is a tube of about 26 feet long, which commences at the mouth, passes by a series of coils the whole length of the body, and terminates at the rectum.

I propose, first, to say something about food, and then to give a fuller description of the alimentary canal and the changes the food undergoes during the process of digestion.

FOOD.

All the substances used as food come under one of four heads, namely, 1, albuminons or proteid; 2, fats; 3, amyloids; 4, minerals. Now a few words on each of these.

1. *Albuminous*.—These are composed of C, O, H, N, sometimes united with sulphur and phosphorus, *e.g.*, albumen, gelatine, gluten. This group is absolutely necessary, on account of the continual loss of nitrogen in the form of urea; and if proteids be not supplied the body quickly wastes, and sooner or later will die, for tissue cannot be formed without nitrogen. 2. *Fats*.—Composed of C, O, H. 3. *Amyloids*.—Also C, O, H, with this difference—in fats there is more than sufficient H to unite with the O, and form H_2O , whilst in amyloids there is always just enough to make a molecule of H_2O , as $C_6H_{10}O_5$. And lastly the *Mineral* foods, as Ca, $2PO_5$, NaCl, &c., and water.

Animals require for food both organic and inorganic substances, the apparent sustenance of life upon a diet wholly composed of organic substances being due to the fact that inorganic substances are contained in all natural organic foods. Taking potato as an example of an organic food, we find that it contains 75 per cent. H_2O and 1 per cent. salts. Bread, 45 per cent. H_2O and $2\frac{1}{2}$ per cent. salts. Again, a mixture of nitrogenous and non-nitrogenous food is essential to the well-being and health of an animal, pure gelatine, *e.g.*, being incapable of supporting life. The truth of these remarks may be demonstrated by the composition of those foods which are sufficient of themselves to maintain life, namely, milk and eggs, both of these containing those four foundations first mentioned, namely, nitrogenous, fatty, starchy, or saccharine, and mineral substances. Dogs have been fed exclusively on gum, or pure gelatine, or sugar, and have finally died. In the sugar diet an ulceration of the eye took place, and this has been observed to be the case with Hindoos who live exclusively on rice.

Man can live upon animal matters alone, or on vegetables, on the condition, of course, that whichever diet he adopts

tains a mixture of the various nitrogenous and non-nitrogenous substances just stated to be essential. Take a vegetable diet, for instance—Bread, milk, eggs, oatmeal, butter. Man wants albumen. Now bread contains 8 per cent., milk 4 per cent. Next fats are necessary; oatmeal, 5 per cent.; butter, 83 per cent. Then starchy or saccharine matters. These are, of course, very easy to obtain in a vegetable diet; lastly, salts and H_2O . Oatmeal contains 1 per cent., bread $2\frac{1}{2}$ per cent. salts. This oatmeal, from its composition, viz., water, 15; albumen, 12; starch, 58; sugar, 5; fat, 5; salts 3, must be very nutritious, being, with the exception of sugar, very similar in its most important ingredients to fat mutton.

The structure of the teeth, and experience, seem to declare, however, that man is best fitted for a mixed diet, and this may be gathered from other facts and observations. The food taken daily ought to represent the quantity and kind of matter necessary to replace that which is lost daily in skin, lungs, kidneys, &c.

By the skin we lose H_2O and salts; by the lungs, CO_2 and O ; and by the kidneys, urica, which is a nitrogenous compound, and salts. To find the amount lost is therefore the first consideration; let us take the two elements C and N, and discover what amount of these is respectively discharged from the human body daily. The quantity of carbon amounts to 500 grains = about 10 ozs., and of nitrogen about 300 grains, or in the proportion of 15 C to 1 of N. *Note this*—Now if these elements could be taken as food in the elementary condition as C and N, how easily could we solve that difficult problem of "How to live on 6d. a day"! But an animal can live only on these elements when they are arranged in a particular manner, in the form of an organic compound, as albumen or starch. Now the great point is to get the largest amount of nourishment out of the smallest quantity of food, thereby giving the digestive organs and the pocket the least amount of unnecessary wear and tear. For example, the relative proportion of C to nitrogen in albumen is 14, or say 15, to 1. Now, if you remember, I said that C was lost as 15 to 1 of N. Well, if a man ate sufficient albumen to supply him with C, he would take four times too much N, and that is very extravagant. Take another case: In bread the proportion of C to N is as 30 to 1. Then if a man ate sufficient bread to supply him with C, he would only get half his proper quantity of nitrogen, or if he took sufficient to supply him with N, he would give his digestive organs extra work to get rid of the superfluous 15 of C.

Hence the true economy of a mixed diet. By taking the proper proportions of each kind of food, as a little meat, a little bread or potatoes, butter, and H_2O , there would be but little waste. Theoretically, $\frac{1}{3}$ lb. meat and a little under 1 lb. bread are sufficient for any man daily, these proportions giving 5,000 grs. C and 300 N, being nearly the amounts first stated to be necessary, namely, 4,500 C. and 300 N. But much depends as regards diet on the individual, his habits and digestive powers, his likes and dislikes, &c.

We will now trace the course of the food and the process of digestion. The first change takes place in the mouth. Here the food is masticated and mixed with the secretions of the salivary glands. The saliva is a transparent watery fluid of sp. gr. 1.00, with alkaline reaction when digestion is going on, but during fasting it becomes neutral. The rate at which it is secreted varies considerably. When the tongue and muscles concerned in mastication are at rest, the quantity is not more than sufficient to keep the mouth moist; but by the thought of food, however, its flow is excited, and by the act of eating is largely increased. Under these circumstances the quantity secreted in 24 hours averages from 1 to 2 pounds. The purposes served by saliva are of several kinds. 1. In the first place, acting mechanically, it keeps the mouth moist, thus facilitating the movements of the tongue in speaking and in the mastication of food. 2. It dissolves soluble substances, thus exciting the nerves of taste—it follows that non-soluble substances are tasteless. 3. By mixing with the food during mastication, it makes a soft pulpy mass, capable of being easily swallowed; and, lastly, it performs a chemical part in the digestion of food—this is, the conversion of starch into sugar, and which is thus rendered capable of absorption. This is due to "ptyalin," a compound existing in saliva to the extent of $\frac{1}{2}$ parts in 1,000, and which does not act on albuminous

substances or fats.* You may here note that the salivary glands of children do not become functionally active until the age of from four to six months; hence the bad effects of feeding them upon starchy compounds until after that age.

We will now follow the downward course of the food. After leaving the mouth it will arrive at the pharynx, the entrance to the windpipe being closed by the epiglottis, over which the bolus slides (N.B.—If it were to get into the trachea it might do fatal injury). The walls of the pharynx being muscular force the food down into the œsophagus. This also has muscular walls, and by these means it is propelled down into the stomach. You will notice that the word "propelled" is used. The act of swallowing both solid and liquid food is not simply mechanical, but entirely muscular. The muscles are arranged in rings in the œsophagus, and, by the contraction, first, of No. 1 at the top, then of No. 2, and so on, one after the other, force the food down. Therefore jugglers can drink whilst standing on their heads, the liquid passing upwards against gravity.

The food has now arrived at that important part, the stomach, which is a curved bag lying right and left in the upper part of the abdomen. Its walls on the outside are muscular, for the purpose of (1) adapting itself to the quantity of food in it, and (2) to exercise a certain amount of compression, and (3) to perform the peristaltic movements, and on the inside is the mucous coat. The surface of this mucous coat is covered with minute shallow pits; into these pits the mouths of the gastric tubules open. When the stomach is empty the walls lie close together, the mucous membrane is quite pale, and no gastric juice secreted; but immediately food enters the mucous membrane becomes red from an influx of blood into its vessels, and an acid fluid, the gastric juice, is secreted in drops, and flows down the sides or soaks into the substances introduced. The gastric juice is a clear transparent fluid, odourless, a little saltish, and very perceptibly acid, the composition being 99 per cent. H_2O , 0.3 pepsin, and 0.2 salts. The quantity secreted probably averages from 10 to 20 pints in the 24 hours. The digestive power depends on the pepsine and acid; neither can digest alone. For the perfection of the process the following conditions are necessary:—1. A temperature of 100° Fahr.; therefore iced drinks should be avoided whilst digestion is going on. 2. The muscular contractions of the stomach, which bring every part of the food into contact with the gastric juice. 3. The constant removal of those portions that are digested (by absorption). 4. A state of minute subdivision, brought about by thoroughly masticating the food. This last and very important condition, being the only one dependent on the will, is very badly performed, in nine cases out of ten, owing to that bugbear, "want of time."

We will now go on with the functions of the gastric juice, which may be arranged under three heads:—1. Its action on nitrogenous substances. 2. On other than nitrogenous substances. 3. Its antiseptic action.

1. *Its Action on Nitrogenous Substances.*—By the action of the gastric juice, together with the temperature of about 100° Fahr., and the muscular movements of the stomach, albumen, in whatever form it may be, is dissolved, and the result is called a "peptone," from whatever source the albumen may have been derived, whether from egg or meat, &c. This peptone differs in a few points from its origin. They are as follows:—The peptones are not precipitable by heat or acids, and—note this—they will pass with ease through animal membranes, and in this way, by osmosis, they are absorbed by the walls of the stomach.

2. *Its Action on other than Nitrogenous Substances.*—The soluble saccharine and saline matters, and so much of the starch as has been by the action of the saliva converted into sugar, are at once absorbed by the stomach; but all the fat and the undissolved starch are not acted upon in the least by the gastric juice, but pass on to the intestines.

3. *Its Antiseptic Action.*—From the proneness to decomposition of organic matters, as food, especially under the influence of heat, moisture, &c., but also from the well-known fact that decomposing flesh (high game) may be eaten

* Ptyalin can only convert starch into sugar in an alkaline solution, and the process is always a slow one. The acid of the gastric juice will stop the process immediately the food reaches the stomach, and it is doubtful if any appreciable change can take place during the passage from the mouth to the stomach.—Ed. C. & D.

with impunity, while it would certainly cause death if allowed to enter the blood by any other route than the organs of digestion; from these facts we should anticipate that the secretions are antiseptic, and this has been proved by experiment. Under ordinary circumstances from three to four hours is the average time occupied by the digestion of a meal, but many circumstances modify the rate, such as the nature of the food, the quantity taken, exercise (gentle being beneficial, but over-exertion injurious), state of mind, &c. Before we go on to the intestines, we will just notice the pylorus. This is situated at the smaller end of stomach just where it forms the intestine. Here the muscles cross in such a manner as to make a sphincter. This acts as a sort of sieve, allowing only the small portions to go through, and keeping back the large until they are further disintegrated. Cooking promotes digestibility of vegetable food by breaking down the cell walls, and thus exposing the contents to the action of the digestive fluids. Raw meat is comparatively indigestible, but cooking converts the insoluble protecting sheaths surrounding the flesh into soluble jelly, and then the interior is exposed to the action of the gastric juice.

We will now go on to the intestines. The small intestine is continuous with the stomach, and the large with the small. The small first. Its average length is 20 feet, with muscular walls outside and a mucous surface inside. This mucous membrane lies in transverse circular folds, which promote, by the gentle resistance they offer to the passage of food, absorption by the glands which cover them. Into the upper part, near the stomach, the liver, during digestion, and the pancreas pour in their secretions by a common opening—the bile and the pancreatic juice, both with alkaline reaction, and both capable of converting insoluble starch into sugar and of emulsifying fats. We will now see what changes the food undergoes during its passage through the small intestine, recollecting that the stomach has acted on, and absorbed only, the proteids and fluids, leaving the fats and insoluble starch. These, together with perhaps a little unabsorbed proteid and fluid, pass through the pylorus and come into contact with the bile and pancreatic juice in the intestines. These complete the process as stated above, the starch becoming sugar and the fat emulsified. Both are thus rendered capable of absorption by the glands, and the indigestible parts of the food are pushed along, losing more and more of their nutritious matter, and after passing through the valve separating the small from the large intestine they become more solid, acquire an offensive odour, and are finally expelled as feces. As this is the end of the alimentary canal it will also be the end of this paper.



AND

Literary Notes.

*The Art of Scientific Discovery.**

THERE is little doubt that this work is destined to be not only one of the books of the season, but a treatise of permanent interest and value. In the brief notice which we are at present able to give of it we shall endeavour to do no more than present a bare idea of its character. We must leave the task of a more critical review of its contents till a future occasion. Some readers will remember a work which was very popular something like a quarter of a century ago, known as Dr. Todd's "Students' Manual." We have the recollection of it as a book crowded with illustrations, and tending to attract earnest-minded young men to a love of study. Somewhat similar in its plan, Dr. Gore's work places before us, in its most attractive aspect, the pursuit of science. The author crowds every page with illustrative quotations from eminent authors or with facts from the history of scientific research. His aim is to cultivate in the minds of all scientific workers the true spirit in which

research should be undertaken. But he does not weary the reader by preaching. He fascinates him by brief records of what others have done, and how they did it, and his illustrations fall into the matter under discussion without the least appearance of being dragged in or prepared for, but as if they came, as no doubt they do, from the rich stores of a full memory.

Dr. Gore defines science as "the interpretation of nature," and man, he says, is the interpreter. What are the qualifications which this interpreter should possess? How can he best train himself to the pursuit? What shall he do and what shall he avoid? How shall he make the best of his circumstances? These are practical questions, and the guidance of an experienced friend on such points is not to be despised. The philosophical sections of the book, too, are of great interest, and well deserve to be studied by those who would make scientific research a part of their life's work. Dr. Gore has a reverence for the search after truth as the path marked out for mankind whereby to reach the great Source of all truth. This he continually impresses on the reader. In short, his conception of scientific research is of the loftiest character, and the humblest seeker after truth, as well as the proudest wrestler with the secrets of nature, may derive strength and encouragement from this excellent work.

An enumeration of the divisions of the work will best give an idea of the author's system. First, we have "a general view and basis of scientific research." Then we pass on to "general conditions of scientific research." These sections are mainly philosophical. Then the treatise becomes eminently practical. "Personal preparation for research" shows how study, manipulative skill, reason, and imagination must be cultivated. The next part treats of "actual working in original scientific research," suggesting methods and means for carrying out ideas; and, lastly, we have a most interesting mass of illustrations of "special methods of discovery."

The volume consists of more than 600 pages, and the sections we have named only point out the chief divisions of the argument.

HOMŒOPATHIC LITERATURE comes upon us thick and fast, and, considering the comparatively small proportion of its practitioners, it is amazing to notice their facility in the production of books. This month four quite new ones lie before us. -Dr. E. B. Shulldham, who evidently writes with dangerous fluency, contributes one on "Coughs and their Cure," with special chapters on "Consumption and Change of Climate." (London: The Homœopathic Publishing Company.) This author professes to write for the public, and his primary care is to make his book a readable one. Puns, poetry, and all manner of quips and cranks are pressed into the service for this purpose, and it must be added that medicinal remedies are generally treated with almost open contempt. Dr. Shulldham is an intelligent and cheerful writer. He tells the public what they certainly ought to know, but what for the most part, we venture to imagine, they do know. His hygienic recommendations, if not startlingly novel, are full of good sound sense, and whoever takes up his book will read it through without fatigue, and will be likely to be healthier for its suggestions as far as they are followed. A work different in character from the foregoing is Dr. Robert T. Cooper's "Clinical Lectures on Inflammation and other Diseases of the Ear." (London: The Homœopathic Publishing Company.) In reference to these lectures we only venture to remark that they seem to be most carefully and conscientiously prepared, giving the most thorough instruction respecting the complaints associated with or arising from aural inflammation. A secondary, but we think novel, observation of Dr. Cooper's which we find in the fourth lecture seems to us worth quoting. Referring to the action of glycerine, and quoting certain recorded cases and some curious facts, the author suggests that possibly the glycerine acts by draining the Eustachian tube in consequence of its attraction for liquids. He supposes that it sets up, as it were, "a certain amount of capillary activity, a discharge of fluid taking place all along the mucous surface of the tympanic cavity and tube, which in this way frees, or in fact washes out, the passages." Dr. Henry Belcher, of Brighton, connects his name with a work

* "The Art of Scientific Discovery, or the General Conditions and Methods of Research in Physics and Chemistry." By G. Gore, LL.D., F.R.S. (London: Longman & Co.) 16s.

in "The Nerves" (London: Gould & Son), professing to give "a few practical observations on the management and treatment of some of the most important and distressing affections of the nervous system." We are really unaware precisely how eminent Dr. Beleher may be, but he evidently holds strong views himself on that point. His introduction might be a burlesque, but its charm lies in its evident seriousness, we might say solemnity. "After labouring for nearly thirty long years in the vineyard of medicine, I am advised by my friends that it would be of public advantage," he commences, to formulate some of the conclusions of his experience. "Having been somewhat successful in the treatment of diseases affecting the nerves, I owe it as a duty to society, now that I have attained my meridian" (!), to enlighten the rest of us. It is disagreeable to him to have to use the first person, and he fears he may be charged with self-seeking or other unworthy motives, but he consoles himself with the consciousness that he is simply actuated by an unselfish desire to benefit his fellow-creatures. This kind of bombast occupies the greater part of five pages. The treatise is quite unworthy of serious criticism. What are we to think of a writer who, after promising to formulate the results of his experience, curtly proceeds thus, after narrating a case?—"At this point I will pause to remark that I can well imagine my reader's anxiety to learn what medicines I prescribed in this case. Unfortunately, I am unable to gratify their very natural curiosity for the simple reason that I cannot impart to the world at large my experience in the manipulation of various drugs, the result of many years' observation and thought." Sweetly unselfish as our author professes to be, he is, nevertheless, willing to take half-a-crown for 80 pages of literature of the character we have indicated.

By far the best of the group of books now under review is the last on our list—a small volume elegantly produced, and bearing the laconic title, "Natrium Muraticum" (London: Gould & Son). Dr. Jas. Compton Burnett, of Birkenhead, is the author, and we shall endeavour as briefly as possible to give an idea of its argument. It must first be stated that he noted Dr. Kidd, of London, the physician who was sent for from London to Berlin to attend on Lord Beaconsfield at the price of 100 guineas per day, and who is reported to enjoy one of the most lucrative practices in England, has recently published a work on the "Laws of Therapeutics," in which he to some extent defines his rather eclectic views. He professes his strong confidence in the law of *similia similibus curantur*, which he declares to be the chief, though not the only, foundation for therapeutics; but he rejects *in vivo* Hahnemann's subsequent "mysticism" respecting the "dynamisation" of medicines by dilution, and the consequent theory of infinitesimal doses. To this latter section of Dr. Kidd's criticism on homœopathy Dr. Burnett's clever little treatise is a direct reply. The author recognises the absurdity of the idea that by any process of subdivision the billionth of a grain can be made more powerful than a grain, and he declares that he has often joined in ridiculing it. But our beliefs, he says, do not affect truth, and though he feels that he is standing on thin air, he has been driven to the conclusion that Hahnemann's assertion had some truth in it. Dr. Burnett gives the history of his experience with *natrium muraticum* as an historical account of his own conversion to this theory, and while he constantly anticipates all possible criticism by suggesting that other reasons may account for his facts, he nevertheless succeeds in bringing a really wonderful chain of evidence in support of the claim that doses of a billionth of a grain of common salt have a powerful medicinal action, not possessed by salt in appreciable quantities. The author's humorous candour almost disarms criticism, but unless we adopt the simple plan of refusing to believe in his "cases," we see no other conclusion to come to than that to which he has himself arrived. His first observation was on a lady who suffered from a most obstinate neuralgia. She had experimented with most of the allopathic remedies, and Dr. Burnett names 19 homœopathic medicines which he tried on her, all without avail. Then he suggested the physician's *ultimum refugium* change of air. It was noticed that she was always worse at the seaside and better inland. This suggested salt in an infinitesimal dose as the homœopathic remedy, and the thought proved a happy one. From his time onward *natrium muraticum* seems to have proved

a veritable sheet anchor in various complaints, its remedial powers being always most marked in cases where salt had evidently been taken in too large a proportion. An experiment he tried on himself, in which the billionth of a grain taken occasionally for a few days produced (or at least was simultaneous with) a sore month, is striking, but it would have had more force if it had been tried again and again. The author does not tell us whether he risked his lips and his theory a second time. We can only give space to quote Dr. Burnett's final words: "This, critical reader, is the way I have wandered in my search after truth as it is in nature; from it I am forced against my will to admit the existence of a something in drugs that becomes operative by trituration. What it is I do not know; what you call it I do not care. *Much's nuch, aber much's besser.*"

PART VII. of the new edition of Cooley's "Cyclopædia of Practical Receipts" contains articles on the alphabetical register between "Evacuants" and "Gas." The expression, "the late lamented and ingenious Mr. Fownes," which occurs under the heading "Flasks," ought, we think, to have been erased by a careful editor in the year of grace 1878. Fownes died 30 years ago (January, 1849).

THE *Scotsman* announces that Dr. J. A. Carlyle, of Dumfries, a Doctor of Medicine and of Laws of the University of Edinburgh, has placed 1,600*l.* in the hands of the Association for the Better Endowment of the University of Edinburgh for the endowment of two bursaries in the faculty of medicine.

WE have received Kingzett's "Animal Chemistry" (London, Longmans), an important work treating a branch of chemical science of the greatest promise. The author had had an experience specially leading him to this study, and his own investigations have not been by any means the least influential in the advancement of our acquaintance with pathological and physiological chemistry. We do not review the work now, but hope to do so next month.



RECTIFICATION OF THE REGISTERS

OF PHARMACEUTICAL CHEMISTS AND CHEMISTS AND DRUGGISTS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—Enclosed is a list of Registered Chemists and Druggists, to whom two registered letters have been sent in accordance with the provisions set forth in Section 10 of the Pharmacy Act, 1868.

The letters have been returned here through the Dead Letter Office, and their names will, unless we hear from them before the end of the year, be erased from the Register of Chemists and Druggists.

The subject being of interest to your readers, I thought you would probably publish the list if I sent it to you.

I am, yours faithfully,

ELIAS BREMRIDGE,
Secretary and Registrar.

Those marked () are Pharmaceutical Chemists.*

Adams, Edmund Tapley	St. Mary Church, Torquay
Adams, Rowland	1 Merrivale Street, Balham, Surrey
Atken, John Borland	Dalbeattie, Kircudbrightshire
Aldcroft, John	6 Greengate, Barrow-in-Furness
Anderson, Thos. Sherman	39 Duke Street, Manchester Square, London, W.
Arnold, Wm. Isaac	75 Brooke Street, Ratcliff, London, E.

- Atkins, Edwin 218 Oxford Street, Stepney, London, E.
 Ball, William Warrington, Lancs.
 Bastick, Samuel 332 Kennington Road, Surrey
 Beaumont, J. H. Holmes Wilmshol, Cheshire
 Bell, Henry Wheatley .. 45 Mulberry St., Radnor St., Hulme, Manchester
 Bell, William Dickinson .. 85 Kirkgate, Leeds
 Bell, William Henry 6 Cleveland Terrace, Bath
 *Bennett, Charles Bristol
 Benson, George William .. George Street, Welshpool, Montgomeryshire
 Biddle, Charles John 36 Oakfield Street, Altrincham, Cheshire
 Bird, Walter Strickland .. 37 Regent Street, London, W.
 Bishop, John Gosborth, Lincolnshire
 Bishop, Walter 11 Hopefield Terrace, Battersca Rise, Surrey
 Blades, Frederick Northwich, Cheshire
 Blankley, Charles Steele .. Gainsborough, Lincolnshire
 Blankley, William Henry .. Silver Street, Gainsborough, Lincolnshire
 Bolt, Richard Tanton 368 Clapham Road, Surrey
 Bond, James Benjamin... 1 Wellesley Road, Croydon, Surrey
 Boyd, Robert 12 Kelvingrove Street, Glasgow, N.B.
 Brindley, Thos. Duastal .. 133 Bond Street, Brighton
 Brindley, John Clivo 218 High Street, Dudley, Worcestershire
 Brocklehurst, Thomas ... Hull
 *Brookes, Frederick Jas. 300 Holborn, London, W.C.
 Brookes, Chas. Theodosius 4 Palmerston Road, Upton, Essex
 Brothers, Francis Tontine Street, Folkestone
 Browne, William 381 Walworth Road, Surrey
 Buek, Alpheus Ferdinando 35 Swanmore Road, Ryde, Isle of Wight
 Bullock, John Alfred 16 Johnston Terrace, Edinburgh, N.B.
 Burgess, James 21 High Street, Northwich, Cheshire
 Bush, William 38 Hungerford Road, Camden Road, London, N.W.
 Butler, Alfred Bulteel .. 1 Walton Terrace, Cotham, Bristol
 Campbell, James Barrhead, Renfrewshire
 Carrroll, Denis 13 Mornington Road, Bow Road, London, E.
 Cartwright, James Staveley, near Chesterfield, Derbyshire
 Challenger, Theophilus ... Aldridge Road, Perry Barr, near Birmingham
 Charles, Michael 2 Barford Terrace, Liverpool Road, London, N.
 Cheffers, Charles Venus.. Scaman's Hospital, Greenwich, Kent
 Chick, William 39 St. Paul's Road, London, N.
 Child, William Carlton Cottage, Pontefract
 Clark, George 1 Chalk Street, Stockton-on-Tees, Durham
 Clarke, George Herbert... 139 Sborditch, London, E.
 Clarke, Thomas Watson... 108 Queen's Road, Bayswater, London, W.
 Clode, Charles 16 Green's End, Woolwich, Kent
 Coeks, William Petty... 9 Chestnut Street, Mount Pleasant, Liverpool
 Codd, Charles 52 Freeman Street, Great Grimsby, Lines.
 Coke, Richard Kenyngham, Somerset
 Comley, Herbert 71 Whitechapel High Street, London, E.
 Cooper, Harriet Elizabeth 23 Haddon Street, Bewick, Manchester
 Coulson, Robert 31 High Street, Gosport, Hants
 Cutts, Thomas New Basford, Notts.
 Dale, Samuel 3 Bermondsey New Road, Surrey
 Daniel, Edward 4 Straud, London, W.C.
 Daves, William Blue Bell Hotel, Falkirk, N.B.
 Deans, John Kerr Galashiels, N.B.
 Dixon, Frederick 189 Southgate Road, London, N.
 Dodridge, Samuel H. S... 5 Portland Place, Balham Hill, Surrey
 Dodridge, Thos. Mitchell 8 Branksome Ter., Acre Lane, Brixton, Surrey
 Dunbar, William A. 14 Saville Place, Lambeth Walk, Surrey
 Dunstan, William 5 Northgate Street, Bath
 Dunston John Reford, Notts.
 Durnford, John 1 Marsham Street, Maidstone
 Dutton, John Blenheim House, Medina Road, West Cowes, Isle of Wight
 Dyer, William George .. 3 Swan Place, Blackman St., Southwark, Surrey
 Eason, John 8 Fairfield Crescent, Prospect Vale, Liverpool
 Elder, William Nind Pulteney Town, near Wick, Caithnessshire
 Emerson, Robert 2 Dorcas Ter., Hammersmith Road, London, W.
 Emsley, Joseph Scarborough
 Farrar, William 75 Stamford Crescent, Ashton-under-Lyue
 Field, Cornelius 146 Regent's Park Road, London, N.W.
 Fleming, James 305 New City Road, Glasgow, N.B.
 Flintoff, James Henry ... Chippenham, Wilts.
 Fremlin, William Henry .. Brinwell, Somerset
 Fuller, John William... 343 Edgware Road, London, W.
 Garratt, James Kingston Cross, Landport, Hants.
 Garsed, Joseph Hill House, near Huddersfield, Yorks.
 Garstang, James Grimsshaw Park Road, Blackburn, Lancs.
 Gater, James 251 Ball's Pond Road, London, N.
 Gibb, David 7 Lothian Road, Edinburgh, N.B.
 Ginner, James Edward.. 166 Lambeth Walk, Surrey
 Goodman, Godfrey 13 Ogwen Terrace, Bethesda, Carnarvonshire
 Goodridge, William Shepton Mallet, Somerset
 Goodworth, Thos. Moore .. Swinelfect, Gooles, Yorks.
 Gordon, James Juniper Green, Edinburgh, N.B.
 *Gordon, John 5 Muirva Street, Glasgow, N.B.
 Gould, Edward Gardiner .. Bownmont Lodge, Queen's Rd., Richmond, Surrey
 Gould, James Emery Bownmont Lodge, Queen's Rd., Richmond, Surrey
 Graves, Jesse 64 Park Street, Hull
 Gray, Wm. J. Sutherland 104 Islington, Birmingham
 Greenacre, Jas. 22 Seething Lane, London, E.C.
 Greening, William Victoria Street, Bristol
 Greenshields, Hy. David 153 Sandringham Road, Dalston, London, E.
 Greenshields, William .. 24 Portland Street, Commercial Road, London, E.
 Griffiths, Joseph 1 Abley Street, Carlisle
 Haire, William Harland .. Audlem, Cheshire
 Halket, William 51 High Street, Camden Town, London, N.W.
 Hamilton, Mary Eric Dunoon, Argyshire
 Hammond, Henry 101 Western Road, Brighton
 Harner, Mary Sophia ... 8 Elphinstone Terrace, Millwall, London, E.
 Hart, George Francis .. 7 Lillath Street, Liverpool Street, Cross Lane, Salford, Manchester
 Hately, John Henry... 11 Bridge Street, Wallbrook, near Goseley, Staffs.
 Hedley, Robert 31 Coney Street, York
 Heggell, Henry Huggins .. Albany Lodge, Great Church Lane, Hammer-smith, London, W.
 Henderson, John B. S. .. Hill Street, Brierley Hill, Staffs.
 Herbert, Joseph 82 Myrtle Street, Liverpool
 Herring, John Audlem, Cheshire
 Hilton, Frederick Henry.. 11 Hopefield Terrace, New Wandsworth, Surrey
 Hindson, James Alfred... 4A Clayland's Road, Clapham Road, Surrey
 Holson, Frederick Eland 2 Western Place, Hove, Brighton
 Holland, Henry 141 Sand Pitts, Birmingham
 Holyoke, Francis 11 Green's End, Woolwich, Kent
 *Hornsey, William 1 James Street, Portobello, N.B.
 Horsfield, Robt. F. W. ... 96 Walworth Road, Surrey
 Horton, Samuel 29 Gloucester Street, Haulgh, Bolton
 Hosie, John 104 Strand, London, W.C.
 Howard, Henry Weston-super-Mare
 Howell, John Swansea
 Howarth, Walter Sep. ... North Road, Highgate, London, N.
 Howse, Frederick 1 Alexander Road, Kilburn, London, N.W.
 Howse, Henry William... 23 Pentonville Road, Islington, London, N.
 *Hudson, John William .. 76 Linthorpe Road, Middlesbrough-on-Tees
 Hulbert, Robert Skeat .. West End Villa, Basingstoke
 Humphreys, John, jun... 11 Sussex Street, Nottingham
 Huxley, John Holden 127 New Kent Road, Surrey
 Huxtable, James 80A, St. Paul's Churchyard, London, E.C.
 Irving, John English Street, Carlisle
 Jackson, Daniel Randall .. Skipton, Yorkshire
 Jackson, Leonard 8 Ward Street, Langston Street, Strangeways, Manchester
 Jackson, William 15 Alfred Place, Leeds
 *James, Alfred Carmarthen
 James, David Owen 19 Queen Street, Carmarthen
 Jamson, William Samuel 70 Newland, Lincoln
 Jennings, Henry William 174 High Street, Lincoln
 Jones, David Llanelli, Carmarthenshire
 Jones, Edwin Hollinwood, Lancashire
 Jones, John The Barracks, Wrexham
 Jones, John Hollywell, Flintshire
 Jones, Robert Buttermarket Street, Warrington
 Jones, William Henry ... 22 Parkfield, Birkenhead, Cheshire
 Keast, Samuel John Market Square, Camborne, Cornwall
 Kent, William 123 Upper Thomas Street, Acton, Birmingham
 Kiddle, Richard Neller .. 61 Wiltshire Road, Brixton, Surrey
 *Kiddle, Wm. Lambert ... 4 Portland Place N., Lower Clapton, London, E.
 Kinsey, Esther Amelia .. Ellesmere, Salop
 Kitchen, George Scaton .. 3 Carlton Street, Nottingham
 Knowles, William H. H. .. Upper Bridge, Holmfirth, Yorkshire
 *Laing, Richard Wm. ... 38 Bloomsbury Street, London, W.C.
 Laughner, John Beoley Road, Redditch, Worcestershire
 Lawrance, John Wilcox .. 7 Burney Terrace, Greenwich, Kent
 Laxton, Thomas 199 Southwark Bridge Road, Surrey
 Legg, Matthew Henry ... 343 Edgware Road, London, W.
 Le Page, William Shincliffe, near Durham
 Levie, Alexander Mair .. 73 Wales Street, Aberdeen, N.B.
 Lewis, Edward William .. 4 Sherwood Crescent, Upper Westbourne Park, London, W.
 Lilwall, Thos. Edward .. 15 Stratheben Villas, New Rd., Shepherd's Bush, London, W.
 Linay, Thomas Wm. 3 Lodge Road, Birmingham
 Linder, Charles 104 Strand, London, W.C.
 Lloyd, James 22 Boundary Rd., St. John's Wood, London, N.W.
 Longmore, Henry Ed. 4 Edward's Terrace, Kensington, London, W.
 McGruer, John Buckie, N.B.
 Machon, Robert Chapel Street, Ripley, Derbyshire
 Mackaness, Charles 42 Fentimam Road, Clapham Road, Surrey
 *Mackmurdo, Walter G. .. Lower Edmonton, Middlesex
 MacLagan, James 34 West Blackhall Street, Greenock, N.B.
 McNay, Thomas 3 Hindpool Road, Barrow-in-Furness
 Macpherson, Richard... 10 Hope Street, Greenock, N.B.
 Margetts, George Wm. ... 2 Market Terrace, Upper Holloway, London, N.
 Marlow, John James... 1 Emuett's Cottages, Hornsey Road, London, N.
 Mason, James Thomas ... 10 Norwich Street, Cambridge
 Mathieson, Alexander ... 7 Balls Pond Road, London, N.
 Maude, William Robert... 75 Belle Vue Street, York
 Mayhew, Austin 111 Cirencester Street, Harrow Rd., London, W.
 Mayor, Robert 12 Poplar Street, Marsh Lane, Preston, Lancs.
 Medland, James Camberwell, Surrey
 Meller, Edward 2 Springfield Street, Liverpool
 Mercer, Francis M. 1 Onnden Villas, Holmesdale Road, Selhurst, South Norwood, Surrey
 Michael, Thomas Creetown, Kircudbrightshire
 Middleton, John 6 Bird Street, West Square, Lambeth, Surrey
 Millar, Charles 14 Arthur Street, Edinburgh, N.B.
 Miller, Mary Rochester
 Milne, John Peter Buckie, Banffshire
 Milton, Timothy Booth... 66 Walshaw Street, Oldham, Lancs.
 Mitchell, Thomas 179 Marsh Lane, Leeds
 Morgan, Alfred 41 Queen's Road, Dalston, London, E.
 Morgan, Henry Alfred .. 53 Parkstone Road, Peckham, Surrey
 Morris, Samuel Henry ... 87 Islington, Birmingham
 Morris, William, jun... 15 Gas Street, Coventry
 Muir, John Fleming Argyle Street, Dunoon, N.B.
 Nance, William 4 Dante Road, Newington, Surrey
 Nickson, Thomas Burton-upon-Stather, Lincolnshire
 Nightingale, Henry Lewis Albion Street, Southwick, Sussex
 North, Mary Anne Earlswood, near Birmingham
 Norton, Charles Benj. S. 11 High Street, Moreton-in-Marsh, Gloucestershire
 Ogden, Hiram 11 Edge Lane, Stretford, Manchester
 Papps, Francis 630 Mill End Road, London, E.
 Parker, Matthew 3 Ord Street, Gateshead-on-Tyne
 Parry, Thomas Jones... Union Row, Criccieth, Carnarvonshire
 Paterson, Alexander ... 4 Shamrock St., Hutcheson Town, Glasgow, N.B.
 Peacock, Wm. Spencer .. 1 High Street, Lower Norwood, Surrey
 Perrin, James, jun... Stockport Road, Gee Cross, Manchester
 Philip, Nicholas Cornelius 5 Market Street, Devonport
 Pitts, Alexander Clarke.. 172 Filar Street, Reading
 Price, David Huddersworth Woodhouse, Sheffield
 Pringle, George Marsh Street, Walthamstow, Essex
 Radford, Wm. Ringley... Baker Street, Enfield, Middlesex
 Rugsdell, Walter 3 Laxor St., Cold Harbour Lane, Brixton, Surrey

amsden, Thomas 29 North Andley Street, London, W.
 awlings, Francis Chas. 48 Fulham Road, London, S.W.
 eichardt, Emil 336 Oxford Street, London, W.
 eynolds, Walter John... 99 Davenport Street, Bolton, Lancashire
 ichards, James 47 Lower Calthorpe Street, London, W.C.
 ichards, William Bevan 4 Princes Street, London, E.C.
 oberts, Anthony Tucker 11 Lamb's Conduit Street, London, W.C.
 obinson, Christopher W. 127 Gosford Street, Coventry
 obinson, John 7 Symon's Street, Swann's Estate, Hull
 obinson, John Edward 127 Gosford Street, Coventry
 ome, George William... 43 Caledonian Road, London, N.
 anders, John 60 Leather Lane, London, E.C.
 idge, John Mason..... 1 Beck Street, Nottingham
 phoes, Frederick D..... Upper Hebbol Ter., Bradford Rd., Huddersfield
 ealy, William..... Kingston Cross, Portsea, Hants
 hearer, John Wick, N.B.
 mpson, Frank H..... 69 Pentonville Hill, London, N.
 mpson, Robert Scouller 96 Taylor Street, Glasgow, N.B.
 mith, Samuel Hallen .. 8 Branksome Ter., Acre Lane, Brixton, Surrey
 oppett, Robert 74 White Abbey Road, Bradford, Yorkshire
 uthworth, Robert B... 14 Bath Street, London, E.C.
 ower, George 6 Royal Parade, Blackheath, Kent
 arrow, Wm. C. F. 5 Pimlico Road, London, S.W.
 ringall, John Barcham 8 Junction Street, Carlisle
 tables, Walter B. 11 Chester Street, Kennington Lane, Surrey
 ainburn, Joseph Highgate, Hawkhurst
 eel, George Payne 123 Buchanan Street, Glasgow, N.B.
 eward, Theophilus Trimpey, near Bewdley
 tokes, John..... Riccall, Yorkshire
 tovell, Edwin..... Guildford Street, Chertsey, Surrey
 urdy, Thomas Metcalfe 372 Oxford Street, London, W.
 utton, John 216 Hoxton Street, London, N.
 nton, Theophilus E. .. 66 Great Howard Street, Liverpool
 waine, Charles Henry .. Somers Road, Southsea, Hants
 Swann, William Henry 799 Fairfield, Southwell, Notts
 wift, Joseph Milnrow, near Rochdale, Lancashire
 wift, William..... Chesterfield Road, Staveley, Derbyshire
 aylor, Thomas Bloxwich, Staffordshire
 ompson, Henry 43 Halton Road, Canonbury, London, N.
 ompson, Robert 91 Tontine Street, St. Helens, Lancashire
 ompson, Matthew..... 66 Cadzow Street, Hamilton, N.B.
 horn, James William .. Kilham, near Driffeld, Yorkshire
 ipper, John Swindon .. Black Horse Hotel, Cheadle, Staffordshire
 ryon, Samuel North Finchley, Middlesex
 wemlow, Thomas 105 Devonport Street, Little Bolton, Lancashire
 alentine, W. Middleton 65 Haddon Street, Woodside, Aberdeen
 Jade, John Fishguard, Pembrokeshire
 akefield, Henry Edward 37 Fishergate, Nottingham
 alton, John Church Lane, Tipton, Staffordshire
 ard, Joseph Leek, Staffordshire
 ardle, James..... Bootle, Liverpool
 arland, Francis Wm. .. Forest Hill, Kent
 aterson, Cornelius 86 Macdonald Street, Birmingham
 aterworth, William .. Sheffield
 eaver, Alfred Eastwood, Notts.
 elch, G. Edwin Andrew Ripley, near Derby
 estlake, Wm. Chas..... 70 East Street, Walworth, Surrey
 urtherhead, Emil Fairford, Gloucestershire
 zehinfeld, Chas. Edgar. 14 Cantlowes Road, Camden Town, London, N.W.
 hitby, John Hunter .. 47 Mortimer Road, Kingsland, London, N.
 llday, George Evans .. Bicester, Oxon
 ilkinson, Mence Pilsea Island, Emsworth, Hants
 ilkinson, Robert 38 Northumberland Street, Newcastle-on-Tyne
 illiams, Jno. Alderslea Hale Road, Ditton, near Warrington
 Williams, Thomas..... Carlton, Selby, Yorkshire
 Wingate, Stephen..... 25 Southgate Street, Gloucester
 ood, John 9 Market Street, Paversham, Kent
 oodall, John 8 Conference Place, Great Thornton Street, Hull
 oolley, Hardy Moulton, near Spalding, Lincolnshire
 oolley, Wm. Edward .. Gatis Street, Whitmore Reins, Wolverhampton
 rigglesworth, George.. 55 Myton Gate, Hull
 ight, Thomas Newton Lymm, Cheshire

cars, this will not do. Until medical men have made themselves as infallible as the Pope himself (and medical infallibility may be the next dogma we are called upon to believe in), I for one shall use my own judgment when what I consider dangerous doses are ordered in prescriptions which I am called upon to dispense; and shall not allow myself to become a mere tool in the hands of a wilful, a reckless, or even a designing doctor. Is it not for the sake of this very check upon the waywardness, or at least the fallibility of medical men, that in such countries as France and Germany prescriptions are bound to be dispensed by a second party, who shall, as it were, supervise its posology, &c., &c.?

I wonder what a coroner before whom a case of death from a poisonous dose of prussic acid would say to the chemist who dispensed it!

Would he exonerate him from blame on the ground that he was acting under the written prescription of a qualified M.D.? No, he would say, and say truly, "Had you not your own personal knowledge to guide you? Are you not obliged by Act of Parliament to pass an examination in order to fit you for such discrimination as this case required?" And I can quite understand the poor chemist so placed deploring his ever reading Dr. Brown's or even Dr. Berdoe's Pharmaceutical Ethics.

Subjoining a few specimens of physicians' prescriptions which I have either seen or dispensed recently, the like of which I hope no chemist will ever dispense for any friend of mine,

I am, sir,

Yours obediently,

L. V. REES.

4 Broadway, Turnham Green.

Acid. hydrocyan.	℥xl.
Sodæ bicarb.	15 grains
Bism.	5 grains
Aquæ cinnam.	3j.
M. ter die sumatur. Mitte 38.	
P. opii	1 grain
Ext. bellad.	4 grains
Mft. pil. b.s.s.	
Ferri sulph.	3iv.
Acid. sulph. dil.	3ij.
Aquæ ad	3vj.
M. capt. 3ss. ter die.	
Liq. morph.	℥x.
Ac. hydrocy. (Schæli)	℥20
Sp. chlorof.	℥xij.
Aq. flor. aurant.	3ss.
Aq. destil. ad	3j.
Mft. haust sextis horis sumatur.	
Liq. Donovan	3j.
Tr. calumb.	5ij.
Aq. lauro-cerasi ad	3vj.
One-sixth t.d.s.	

NOTE.—In each of the above cases the doctor, being communicated with, corrected his error; but, according to Dr. Brown's "Ethics," these prescriptions should have been dispensed without hesitation. Why? Because there may be cases in which very large doses would be admissible!

MACHINES OR MEN.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—It seems according to the pharmaceutical law laid down by certain members of the medical profession in the late numbers of the *Pharmaceutical Journal*, that a pharmacist is henceforth to be an automaton, that whatsoever seemeth good in the eyes of medical men to prescribe, a chemist must dispense whether he will or no without demur. For the future there must be no more checks on the irresponsible practitioner of medicine nor his *cacothetes experiendi*, and whether a blue pill or 5 grains of corrosive sublimate be ordered to be taken at bedtime, a black draught or 2 drams of laudanum in the morning, all are to be dispensed with equal equanimity if the doctor so prescribe; and as to the chemist, why, it is no business of his.

This may do very well for students in pharmacy, for the babes and sucklings of the trade; but for an old man of the ways of common sense, who has become a veteran in the ranks of pharmacy, and knows how often he has had to whisper information posological and otherwise into medical

Foreign Items.

GINGER.—The cultivation of ginger has been commenced in California with good prospects of success.

DRUGGISTS' LICENCES IN JAPAN.—The Minister of Finance for Japan estimated that for the year 1877 the revenue from druggists' licences would be 11,557. 1s. 8d.

OPIMUM SMUGGLING.—In September a boy was arrested at San Francisco for smuggling 160 lbs. of opium. 1,396 boxes and 940 lbs. of opium have been imported into San Francisco between January 1 and October 1 of the present year.

THE NEW HAWAIIAN TARIFF, approved by King Kalakaua on August 1, 1878.—Drugs and medicines: tea, perfumery (other than that which pays a spirit duty), powders; hair, tooth, nail, and other toilet brushes; and soap, all of which formerly paid 25 per cent., now pay 10 per cent. *ad valorem* on entering the island. Pea-nut oil pays 25 per cent.

A LETTER from Havana in the *Cologne Gazette* says that swarms of locusts have destroyed the indigo crop in San Salvador. Considerable anxiety has been caused by their approach in Guatemala.

SOAP IN HAÏTI.—Major Stuart, H.B.M. Consul in Haïti, in his report on the trade of the year 1877, says:—"While France has here the monopoly of toilet soaps, the house of Fay Brothers, of New York, supplies a strong-smelling yellow bar soap which has hitherto kept all other of the kind out of this market. The English and the French have in vain endeavoured to supersede it, but the Haïtian washer-women will have no soap but Fay's; and as they use it without stint, they are by no means small customers."

SPECIALTIES IN PERAK.—On page 419 of Major F. McNair's interesting work on "Perak and the Malays" is found this paragraph:—"For supplies in the way of medicine the European settler, traveller, or sportsman should take a sufficiency of quinine, Lamplough's pyretic saline—which is invaluable—and the genuine chlorodyne. These three form a medical armoury, and will keep most diseases at bay; while, by way of fortification, a supply of brandy for medicinal use or burning should form a portion of the medical stores therein; in cases where brandy is wanting and a good stomachic is needed, a tea, made by infusion of green ginger, answers admirably. Lastly, a bottle of Lea & Perrin's Worcester sauce, which is not only a relish, but acts, when taken alone by a traveller wanting appetite, as a splendid stomachic and an excellent pick-me-up."

OLIVE OIL AND SPONGES IN CYPRUS.—In a report on the trade of Cyprus, recently published, Mr. Consul Watkins says:—"The produce of olive oil in 1877 was estimated at 250,000 oke, against 200,000 oke in 1876. Prices ranged from 9 pias. to 10 pias. an oke. The oil-producing districts are Keryina, Kythrea, Larnaca, and Limassol. As a rule the oil tree only produces abundantly once in five years. The conditions required for a good yield are cold and wet weather, when the quantity produced may reach 400,000 and even 500,000 oke. It is rarely exported; when it is cheap, soap is made in such quantities as to supply Mersine and other parts of Caramania. Sponge-fishing commences in May and ends in August. The fishers are Greeks from the island of Hydra and Castelrossa. About 40 boats in all were employed in 1877, each boat being manned by a crew of eight to ten. Operations extend from Baphos to Caravostassi, on the south-western and western coasts, and from Famagusta to Cape St. Andrea on the eastern coast. The quantity taken last summer amounted to about 2,500 oke of all sizes and qualities, chiefly of the more common kind. Five hundred oke were sold to Syrian buyers at 20f. per oke; the remainder were taken away."

CHINESE MEDICINES.—In the fortnight ending September 30, sixteen packages of Chinese medicines and thirteen cases of drugs were exported from San Francisco to Tahiti. Before 1860 Chinese medicines were the only articles of foreign produce used by the Japanese, the only articles of commerce admitted to their ports. In exchange the Japanese sent sea-slugs to China. It took some years to create a demand for European drugs in Japan, but since 1876 a considerable industry has arisen in that island supported by the fraudulent imitations of European proprietary medicines. The Tahitian demand for Chinese medicines is probably produced by Chinese immigrants. In the fortnight ending October 1, 196 skins of fungus, 595 flasks of mercury, and 57 packages of ginseng were sent to China from San Francisco. The advertisements most conspicuous in the streets of China and (a few years ago) of Japan were announcements of this drug and of life pills and other quack medicines. The word is pronounced and sometimes spelt "jinseng." At the same time four packages of Chinese medicines were despatched to Panama. The shipments to Japan during the same period from that port included no drugs or medicines, although they amounted to \$17,620.

ONE OF THE EXHIBITORS in the Class of Chemicals and Chemical Products at the Paris Exhibition was asked by the jury of the class to give something towards the State Lottery. He replied that he begged to offer them the bronze medal which they had taken the liberty to inflict upon him without having examined his products.

The Poison Cupboard.

AN AMERICAN JOURNAL states that two fine young short-horn bulls have died from eating oleander leaves.

IT IS REPORTED from Munich that a case of arsenical poisoning has occurred in a man who has been suffering from a disease of the eyes, and who has for a long time worn a green silk screen over his face.

LEAD POISONING.—An interesting case of lead poisoning through criminal negligence is reported from Mosbach. The patient began to suffer some years before 1876, and consulted several physicians in vain until Dr. Wittmer made a correct diagnosis, and after a treatment of over three-quarters of a year entirely cured him. The poisoning was caused by imperfectly-tinned lead snuff-boxes, in which a particular brand of snuff was packed, which the patient was in the habit of buying from one and the same manufacturer, and which became contaminated with lead. A suit against the tobacco dealer was filed, who was convicted and sentenced to incarceration for eight days and payment of costs.—*American Journ. Pharmacy.*

THE ACTION OF TOAD POISON ON THE HUMAN BODY.—A child of six years old followed a large toad on a hot summer's day, throwing stones at it. Suddenly he felt that the animal had spurted some moisture into his eye. There suddenly set in a slight pain and spasmodic twitching of the slightly-injected eye, but two hours after coma, jumping sight, desire to bite, a dread of food and drink, constipation, abundant urine, great agitation manifested themselves, followed on the sixth day by sickness, apathy, and a kind of stupor, but with a regular pulse. Some days later, having become comparatively quiet, the boy left his bed; his eyes are injected, the skin dry, the pulse free from fever. He howls and behaves himself like a madman, sinks into imbecility and speechlessness, from which condition he never rallies.

A FATAL "LAPSUS CALAMI."—A physician of Sangerhausen, in Thuringia, having occasion to prescribe for sleeplessness in an hysterical patient, wrote the following prescription:—"Chlorhydr. 15.0; tinct. opii 15, aque 60.0; M. A third part to be administered in the evening as an enema." The patient died, and a prosecution was instituted against the physician and the apothecary who dispensed his prescription. A *lapsus calami* had been committed on the part of the former, who omitted to put "gtt." after the "tinct. opii 15." The prescription was made up by a young unqualified pupil, who read the 15 to signify *gramms*, as the 15 of the chloral and the 60 of the water obviously did. A properly educated apothecary would have taken the prescription to the physician before dispensing it. The Court sentenced the physician to one month's imprisonment, the apothecary to two months', and his pupil to three months'.

Pharmaceutical Chemistry.

VAGINAL PESSARIES.—Rennard, of St. Petersburg, recommends the use of agar-agar instead of gelatine in the preparation of vaginal pessaries. It possesses all the physical properties of gelatine, but is not acted on by tannic acid.

LYCOPodium ADULTERATION.—M. Stanislas Martin has examined a sample of lycopodium which possessed a suspiciously low inflammability. He found that it contained a large proportion of dextrin reduced to an impalpable powder. This falsification can be easily detected by the microscope, or by treating the suspected sample with water.

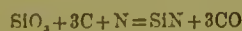
OXALIC ACID AND OZONE.—According to a report of Professor Beilstein, M. Jeremin has communicated to the Russian Chemical Society the fact that a solution of oxalic acid is capable of absorbing considerable quantities of ozone. Such a solution may be preserved for a long time, and acts as a disinfectant of considerable power. An old solution, moreover, was found to be even a better disinfectant than a fresh one.—*British Medical Journal.*

VINEGAR TURNING BLACKISH ON EXPOSURE.*—G. C. Wittstein describes an article sold at Munich, in sealed bottles, as "Weinessig" or wine vinegar. When the bottles are opened for use the vinegar, which is at first colourless, gradually becomes muddy green in colour, and blackish lumpy particles float in it. To the taste it is simply a strong table vinegar. When evaporated it leaves about 1 per cent. of a varnish-like residue, consisting almost entirely of oxide of iron. Wittstein considers that it has no claim to be called wine vinegar, but is really purified wood vinegar, still containing a small proportion of empyreuma, in the form of pyrocatechuic or pyrogallie acids, or both, and a little iron oxide. The oxidation of the iron and acids by atmospheric air causes the precipitate noticed.

OLEATE OF ZINC.—Dr. H. R. Crocker has reported very favourably, in a recent number of the *British Medical Journal*, on the use of oleate of zinc in eczema. It is chiefly useful in the discharging stage of the acute and chronic forms of the disease. The preparation used by Dr. Crocker was made by Mr. Martindale by the following process:—One ounce by weight of oxide of zinc is stirred with eight fluid ounces of oleic acid, made as free as possible from palmitic acid. The mixture is allowed to stand for two hours, and is then heated until the oxide is dissolved. On cooling it forms a yellowish white hard mass. An ointment can be made by mixing one part of the oleate with nine parts of vaseline, or two parts of lard or simple ointment. When made with the two latter materials it quickly becomes rancid, but vaseline preserves it for a long period.

AN ADVANCE IN THE MANUFACTURE OF BENZOIC ACID.—Benzoic acid is made in considerable quantities from naphthalin, a bye-product of coal-gas making. The crystalline incrustation which surrounds the taps of coal-naphthalin is this substance in an impure state. To make benzoic acid it is converted by nitric acid into naphthalic or phthalic acid; this is converted into calcium phthalate by neutralisation with lime. When this salt is heated for several hours with slaked lime in a closed vessel at a temperature of 640° Fahr. benzoate and carbonate of calcium are formed, from which benzoic acid may be readily separated. A. Guyard has discovered that phthalic acid may be prepared by synthesis in five ways, namely:—From salicylic acid and carbon dioxide; from resorcin and carbon dioxide; from salicylic acid, resorcin, and oxalic acid; from benzoic acid; and by heating together benzyl chloride (C_6H_5Cl), carbon chloride (C_2Cl_6), and nitric acid. It is not probable that either of these processes will be adopted at present for making phthalic and thence benzoic acids. Still it is quite possible, if benzoic acid should become the popular antiseptic, that these or similar reactions may be utilised on a large scale.

ARTIFICIAL PRODUCTION OF AMMONIA (M. Knab)†.—A fixed acid, containing three equivalents of oxygen (as silicic, boric, or aluminic acid or oxide), is obtained in a state of chemical subdivision by precipitation or otherwise. This is mixed with three equivalents of charcoal, and ground to an impalpable powder. The mixture is placed in a retort and heated to redness. Air is heated, and its oxygen is at the same time converted into carbonic acid and oxide, by passing it over incandescant charcoal, and while still at a high temperature it is driven through the heated mass of acid and carbon. The oxygen in the acid combines with the carbon, and the silicon, boron, or aluminium forms a nitride with the nitrogen of the air. Steam is afterwards forced through the nitride, and by double decomposition forms ammonia and silicic or boric oxide, or alumina. The following is the equation:—



Then



As three equivalents of hydrogen are required to convert the nitrogen into ammonia, an oxide must be used which contains three equivalents of oxygen.

A NEW SOLUTION OF IODINE.—Dr. Blackwill, in the *Philadelphia Medical Times*, recommends oil of bitter almonds

as a solvent for iodine. In two months, he says, the oil will take up one-third of its weight of the metalloid, and the solution can then be mixed with oils, alcohol, ether, &c. He suggests the following formulae:—

Iodised oil of bitter almonds contains 20 per cent. iodine.

Iodini pulv.	..	..	..	..	..	..	3j.
Olei amygdalæ amar.	..	..	..	..	..	..	3j.

Mix and shake occasionally for two months. This can be used externally mixed with glycerine, soap liniment, or other substances.

Iodised Glycerine.

Iodised oil of bitter almonds	..	3j.	(= 15 grs. iodine.)
Glycerine	..	..	3vij.

Mix. This diluted may be also used internally, in doses of 2 drops (= $\frac{1}{20}$ gr. iodine).

Iodised Water.

Iodised glycerine	..	..	3j.	(= 2 grs. iodine.)
Water	..	..	..	0j.

Mix. A tablespoonful of this (about $\frac{1}{20}$ gr. iodine) can be taken for a dose.

Iodised Codliver Oil.

Iodised oil of bitter almonds	..	..	..	gr. xvj.
Codliver oil	..	..	..	0j.

Mix and shake. A teaspoonful contains $\frac{1}{32}$ gr. of iodine.

METHYLAL.—In the sixth Cantor lecture delivered by Dr. B. W. Richardson, and published in the "Journal of the Society of Arts" for November 8, some interesting information is given on the subject of Methylal. The lectures describe a long series of experiments undertaken to discover some method of preserving meat in a fresh state, so that dead flesh might be easily imported from South America and similar pastoral countries. Experiments were made to determine the preservative powers of the vapours of a large number of substances generally thought to possess antiseptic properties. The vapour of methylal was the only one of these which gave satisfactory results. Methylal is a little-known liquid, sp. gr. .885, vapour density 38, with a pleasant odour, readily miscible with water in large proportion, boiling at 108° Fahr., powerfully anæsthetic, and possessing the formula $C_3H_5O_2$. A specimen was shown prepared by Mr. Williams, who, said the lecturer, is a master in the production of difficult chemical organic compounds. Until Dr. Richardson commenced his experiments in 1867, methylal was simply a chemical curiosity. It is made by distilling together methylic alcohol and sulphuric acid in the presence of peroxide of manganese. Its low boiling-point enables it rapidly to envelope in an atmosphere of methylal vapour any substance with which it may be enclosed in a limited space, and the vapour being soluble in water permeates like a salt the whole structure of organised materials, such as flesh. When red muscular fibre is exposed to an atmosphere of it alone, it is preserved, but at the same time somewhat discoloured. When, however, the vapour is largely diluted with oxygen, coke vapour, coal gas, or carbonic oxide, the colour of the substance is perfectly retained. Six specimens of mutton and six of beef were enclosed in sealed vessels filled with an atmosphere of coke vapour. Into one each of beef and mutton one fluid drachm of methylal was poured before sealing, into another 2 drachms, and so on. These were sent on a voyage to Rio Janeiro, and when they returned they were compared with an exactly similar series which had been kept at home. It was found that all the samples of meat had been thoroughly preserved, except those in the vessels containing only one fluid drachm of methylal. These had retained their colour, but were slightly tainted. A specimen of beef shown at the lecture had been preserved with methylal for 46 days, and it was difficult to see that it had in any way changed in appearance from the day it was first submitted to the vapour. Meat preserved in this way retains when cooked a slight flavour of methylal, and is somewhat condensed, like salted meat. If it were possible to obtain a fluid with all the properties of methylal, but inodorous and tasteless, we should have a material very near perfection as a preservative agent.

* *Chemiker Zeitung in Pharm.* Centralhall.

† Abstract of a new process published in *Le Moniteur des Produits Chimiques*.



TO MAKE THE BEST TOOTH-POWDER.—Grind your own teeth.—*Punch*.

MEDICAL.—A doze outside on a sweet night is very likely to result in a dose inside of sweet uitre.—*Fun*.

AT THE SALFORD HUNDRED QUARTER SESSIONS, on October 21, a jurymen sought to be excused on a medical certificate stating that he was suffering from "nervous debility arising from alcoholic excess." The excuse was not accepted, and as the defaulter did not attend he was fined 5*l*.

THE TAR AND THE DOCTOR.—Doctor, looking [learned and speaking slowly, "Well, mariuer, what tooth do you want extracted? Is it a molar or an incisor?" Jack, short and sharp, replied, "It is on the upper tier, on the larboard side. Bear a hand, you swab, for it's nipping my jaw like a lobster."

PROTECTION FROM MOSQUITOES.—It may not be generally known that these pests have a great dislike to strong odours of oil of cinamon or cloves. The best plan is to mix half a drachm of the oil (not the essence or spirit) with an ounce of spermaceti ointment, and smear it over the face and hands.

GENTLEMAN v. PHARMACIST.—Mr. A. W. Gerrard has published an announcement thus worded:—"As Dr. Ringer and myself are anxious to obtain further supplies of pituri, none being obtainable in this country, any gentleman or pharmacist in Australia or New Zealand forwarding small parcels of an ounce or so shall receive our best thanks." Who is responsible for this insinuation on the Australasian pharmacists?

ADULTERATED OPIUM.—Dr. C. Finckle, in the "Dictionary of Pharmaceutical Science," states that he has met with the following adulterations of opium: Macedonian, with clay; Angora, with pieces of wax; Amasia, with cherry gum; Taushanly, with extract of liquorice; and Balukhissar, mixed into a homogeneous mass with fused colophonium. He has also met with an adulteration consisting of cakes, shaped like opium, which were composed evidently of clay and cowdung.—*Philadelphia Druggist and Chemist*.

HEALTH AND TRADE.—Here is the Louisville *Courier Journal's* infallible remedy for prostration in business:—"Strong doses of advertising should be administered to business that looks bilious about this time of year. This remedy for bilious looks is a specific at once cheap, pleasant to take, and infallible. A few packages of it judiciously administered will do more to put the patient on his legs and give him a strong vigorous constitution than anything else in the whole Materia Medica of commerce and trade. To be had at all responsible newspaper offices."

POULTICES.—The common practice in making poultices of mixing the linseed-meal with hot water, and applying them directly to the skin, is quite wrong, because, if we do not wish to burn the patient, we must wait until a great portion of the heat has been lost. The proper method is to take a flannel bag (the size of the poultice required), to fill this with the linseed poultice as hot as it can possibly be made, and to put between this and the skin a second piece of flannel, so that there shall be at least two thicknesses of flannel between the skin and the poultice itself. Above the poultice should be placed more flannel, or a piece of cotton wool, to prevent it from getting cold. By this method we are able to apply the linseed-meal boiling hot, without burning the patient, and the heat, gradually diffusing through the flannel, affords a grateful sense of relief which cannot be obtained by other means. There are few ways in which such marked relief is given to abdominal pain as by the application of a poultice in this manner.—DR. T. LAUDER BRUNTON, in *Brain*.

AN EDITOR who speaks as a man who has discovered a fact by experience says the new way to prevent bleeding at the nose is to keep your nose out of other people's business.

SPOONS AS MEDICINE MEASURES.—For many years pharmacists have known and have strenuously endeavoured to teach the doctors that ordinary spoons have long been much greater in capacity than the spoons mentioned in prescriptions. M. J. A. M'Munn, of Belfast, has recently written to the *Lancet* recording his discovery that an ordinary tablespoon contained no less than 7 drachms and 5 minims. He hopes something will be done to remedy this evident danger, and suggests that an "imperial tablespoon" of known capacity should be adopted. The subject has been thoroughly thrashed out by dispensers, and they are generally agreed that doctors should order ounces or half-ounces or "measured" spoonfuls, in each case directing their patients to obtain a medicine measure. The suggestion of Mr. M'Munn is practically the same thing, for it would of course be necessary for every patient to have an "imperial tablespoon," but it would most likely be impossible to obtain an Act of Parliament to imperialise an unnecessary measure, and the spoonfuls measured from graduated glasses are of the capacity which has long been attributed by doctors to the spoons of ordinary life.

BANKRUPTCIES AND LIQUIDATIONS.

W. BEATSON, Chemical Manufacturer, Rotherham.

ACTION on Dishonoured Bills of Exchange. On November 5, at the Nisi Prius Court, before Mr. Justice Field and a special jury, the Yorkshire Banking Company sought to recover from Beatson & Mycock 76*l*. 8*s*. the amount of bills of exchange for Beatson and another. One of the bills was dated March 6, 1878, and was for 276*l*. 15*s*., drawn by Kelly & Co. on Wilson, and endorsed by the defendant Beatson; and the other was drawn by Josiah Carr on Beatson, and accepted by him for 184*l*. 13*s*. Both had been drawn since the partnership of Beatson & Mycock had been arranged, but Mycock knew nothing of the transactions, and resisted his liability on this ignorance, and on the fact that the money had not been applied to the purposes of the partnership.

Before Mycock had entered the firm the only banking account kept by the defendant Beatson had been headed "William Beatson, Esq.," and when the partnership was arranged the same account was retained, and no notice was given to the bank of the change in the firm. In consequence of this the signature, "William Beatson," took at the time a double meaning. His private account not being separated from the account of the firm, it became doubtful whether his signature designated himself in his private capacity or in his capacity as a member of the firm. The contention of the defendant Mycock was that Beatson drew these bills in his private capacity for private and secret purposes, and that for this reason the firm was not liable for the amount. This was the chief question for the decision of the jury. After an hour's consideration the verdict returned was that in the cases before them the signature, "William Beatson," represented the firm of chemical manufacturers, and that Mycock was therefore included in the liabilities it covered. There was another action by the Leeds and County Bank against Beatson & Mycock, and, as the facts were precisely similar, it was agreed that one case should decide the other.

On November 12, in the Common Pleas Division of the High Court of Justice, the defendants in this case moved for a rule for a new trial, on the ground that the jury were not justified in their verdict, and that the learned Judge should have directed them to find a verdict for Mycock. The rule was granted.

J. & J. C. KERNEY, Chemical Manufacturers, Stratford.

This bankruptcy occurred upon the petition of Mr. P. C. Smith, 7 Carpenter's Road, Stratford, the bankrupt carrying on business at the Essex Works, Stratford, under the style of "Kerney & Co.," and the meeting for public examination

was held on the 8th inst., before Mr. Registrar Hazlitt. The joint debts were returned at 232*l.* 9*s.* 4*d.*, and no assets. The separate debts of J. Kerney were 260*l.* 8*s.* 4*d.*, and of J. C. Kerney 563*l.* 16*s.* 6*d.*; no assets. The trustee offered no opposition, and the bankrupts were allowed to pass their examination.

PARKER & AMISS, Manufacturing Chemists, Old Ford Road.

The adjudication in this case was made upon the petition of Mr. Henry Carter, of 720 Old Ford Road, and the meeting for the bankrupts' public examination was held on the 2nd inst., before Mr. Registrar Brougham. The statutory accounts had not been filed, and it also appearing that the trustee had omitted to give the necessary notices of the meeting, the proceedings were adjourned.

Trade Notes.

THE NATIONAL CHEMICAL COMPANY, whose specialty is to supply chloride of lime in air-tight odourless packets, have removed their place of business from Hoxton Street to 26 Tabernacle Walk.

EUCALYPTUS TOILET VINEGAR is a refreshing combination especially suitable for sick or close rooms. The bracing fragrance of the eucalyptus is well toned by the acetous odour, and the preparation may fairly be described as an aromatic disinfectant. It is sold in bottles with metallic sprinkling caps attached, and is the property of Messrs. Whittaker & Grossmith, of Fore Street, City.

THE AERATED WATER TRADE IN CYPRUS.—Messrs. Davenport & Co., 99 High Holborn, write:—"We notice under 'Trade Notes,' *re* Cyprus, that our friends Messrs. Barnett & Foster have sent a soda-water outfit to this island, and that it is doing well. They are not alone in this, as we have ourselves sent two entire outfits there. The owner of the only one of which we have since heard says he is doing very well, using both patent bottles (Horner's) and also corks."

THE WILL of Mrs. Eliza Hooper, late of 43 King William Street, London Bridge, who was drowned by the sinking of the *Princess Alice* on September 3 last, was proved on the 26th ult. by Mr. W. Wrench Towse, Mr. J. V. Diplock, and Mr. R. Howden, the executors, the personal estate being sworn under 9,000*l.* The testatrix provides for the business of a chemist and druggist, carried on for many years by her late husband, being taken over and continued by his nephew, Mr. Leonard Hooper, subject to certain payments to her estate; all the residue of her property is directed to be held upon trust for her daughter, Mrs. Emily Towse (who was drowned with her), for life, then to her said daughter's husband for life, and then to their children.—*City Press*.

RIMMEL'S ALMANAC for 1879 is a well-executed, and of course sweetly scented, souvenir of the Old Masters. It contains medallion portraits in colours of Dürer, Raffaele, Rubens, Poussin, Murillo, and Reynolds. A humorous panoramic pocket book, with a series of designs entitled "Hearts and Diamonds," leading up to the rejection of the former and the acceptance of the latter, cannot fail to be popular. The fan almanac shows our old friends of the Zodiac all out courting. There is a good deal of freshness, too, about Mr. Rimmel's Christmas and New Year's Cards, and among his new designs for concealing little bottles of scent we may

mention especially the lobster and the apple as being particularly well done.

Trade Changes.

MR. JOHN ETTLES, of 22 London Road, Brighton, has removed to Elgin, and is succeeded by Mr. Alexander Anderson.

MR. ALFRED COURT, chemist and druggist, Bull Street, Birmingham, has disposed of his business to Mr. J. Frank, of Whitby.

MR. W. E. JONES succeeds to the business of Mr. Skipper at Dalston Junction. The latter gentleman is preparing himself for the medical profession.

MR. CHARLES MANTELL, chemist and druggist, of Cregoe Street, Birmingham, has removed to the adjoining shop, which has been remodelled to suit his extended trade.

MR. GEORGE BLENNERHASSET WOOLLEY, of Maidstone, has succeeded to the business, Oxford Street, Leicester, established by Mr. Oliver Burden, who retires. Mr. Brett, of Leicester, conducted the valuation, and completed the transfer on behalf of both parties.

Obituary.

BARDSLEY.—On September 17, Mr. William Bardsley, chemist and druggist, Failsworth, near Manchester. Aged 33 years.

BOWLES.—On September 17, Mr. Robert Bowles, chemist and druggist, East Street, Bedminster, Bristol. Aged 37 years.

DOWMAN.—On October 16, Mr. George Dowman, pharmaceutical chemist, 160 High Street, Southampton. Aged 61 years.

HARTLAND.—On September 16, Mr. James Hartland, pharmaceutical chemist, St. Augustine's Parade, Bristol. Aged 66 years.

HATTON.—On October 4, Mr. Edward Hatton, chemist and druggist, Chesham, Bucks. Aged 42 years.

O'DOWD.—On October 18, Mr. J. C. O'Dowd, chemist and druggist, Hannah Street, Perth.

PILE.—On November 7, at North Street, Chichester, Mr. George Pile, chemist and druggist, third son of the late Mr. Thomas Pile, of Tilsden, Cranbrook. Aged 43 years.

WILLS'S "HABITAT MAP."—*New Remedies*, the well-known and excellent American periodical, has displayed its appreciation of Wills's "Habitat Map" in a way that would have been more flattering if it had been a *little* less piratical. In the October issue is published a copy of the map executed with the greatest fidelity, the only differences being that the "New World" is removed to the left-hand of the sheet, and North America, Europe, and Australia are coloured green instead of red. The lines which form the distinctive feature of the map are copied exactly, even to the numbers attached to them. The only thing of which we have to complain is that no acknowledgment is made of the source it is taken from. A similarly equivocal compliment is paid in the same journal to ourselves. On the last page is printed the table of "Original Packages," which for some years has found a place in our Diary. The list would probably have been printed complete had space allowed, but as one or two items are omitted we presume the printer's devil has been at work. We need hardly say that we are no better treated than Mr. Wills in the matter of acknowledgment.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

1½ lb. acaia coccinea, for hair wash, cleaning silk, &c. What offers? Lea, Folkestone.

A 10-guinea Halse's galvanic battery complete, second-hand, 5l. 10s. 7/215.

Evans's 4l. 4s. Materia Medica cabinet, good as new, 3l. 38/214.

Hogarth's works; exchange for good microscope. Mumbray, Richmond, S.W.

For 50s., a good microscope, with condenser and slides, in mahogany case. 12/217.

Comalines restorer, small, clean; large Wedgwood mortar. 2/216.

Inhaling oxygenator, complete; 3-pint gazogene; 3-pint seltzogene. Offers solicited. Snowden, Hastings.

Albinus, magnificent plates; muscles and bones, 40s., or exchange for scientific apparatus. Mumbray, Richmond, S.W.

Muter's "Chemistry," 7s. 6d.; Scoresby Jackson's "Materia Medica," 4s. 6d. Lees, 19 Notting Hill Terrace, W.

Bent-glass show case, good condition, cheap; Squire's "Companion," 2nd edition, 3s. Thomas Slater, Stone, Staffordshire.

For immediate disposal, about 3 cwt. of fine wax, good colour, price 1s. 2d. per lb. Sample free. H. Kemp, Newcastle.

Pharmaceutical Journal, 3 vols., bound in boards, 1863-66; also 1867-68-69., unbound, the lot 7s. 6d. Bordass, Driffeld.

Gas shop-stove, with ornamental top, only used a few times, as good as new, cost 2 guineas, take 28s. Lea, Folkestone.

Five 90-gall. oil cisterns, galvanised iron, fitted with brass taps and loose lids, only used a few months, price 2l. each. Potts, Mansfield.

A 4-gallon copper still, with steam jacket, cistern, worm, &c., in complete working order. Parrett, Chemist, Winslow.

A lot of useful surgical instruments to be sold cheap; write for list. J. Allen, Chemist, Plymouth.

Two 28-lb. bags genuine pulv. acid tart., ½ lb. sample sent. P. O. Order. H. Haro, 81 South Street, Goole, Yorks.

Macfarlane's morphia in ounce bottles, 7s. 3d. per oz.; 12 ozs. carriage paid. What offers for 100 ozs.? Peebles, Chemist, Dundee.

Preliminary students, Wills' Lectures, abbreviated, least to copy, 2s.; other books necessary. J. E. S. Bunn, Halstead.

Over-stocked.—2 dozen 1s. 6d. and 1 dozen 3s. bottles Bailey's sulphine, clean and new; 2l. 10s. the lot. 22/215.

Hancock's mixing and sifting machine, quite perfect, cost 25s., price 15s. Oldham, Chemist, Wisbech.

A 1-gall. graduated glass percolator, 21s.; flask, burette, jar for volumetric analysis; what offers? Model of still, 12 in. high; what offers? two Maw's earthenware inhalers, 2s. each; 21 volumes of the *Lancet*, 1823-32, bound; what offers? 5/217.

Carr's patent drug mill, new, cost 4l.; 5-cwt. platform weighing machine; 2 oil cisterns, 180 and 90 gallons. H., 196 Union Street, Oldham.

Greenwood, Hancock & Co.'s mixing machine, No. 3, cost 19s. 6d.; 2 extra sieves and brushes, new; York Glass Company's percolator, new, cost 21s., quart, no tap. What offers? 7/214.

A pair of 10-inch beam scales, on mahogany stand, drawer under; pair ditto on stand, good condition, cash, 15s. and 12s. 6d. cash. Asquith, Druggist, Colne.

A Weightman's printing press, with two founts of type, nearly new; cost 42s.; prints 7 inches by 10; price, 21s.; Maish, Chemist, Getham, Bristol.

About 4 cwt. senna. E. L., 1d. to 3d. per lb.; 4 cwt. aloes Bbds. 6d. per lb.; samples per post. Address, R. Taylor & Co., 36 Friday Street, Cheapside.

Statbam's prize-medal chemical cabinet, with a quantity of other things. Particulars on application. A cheap lot. 70s. H. Wood, 16 Market Square, Dover.

Splendid large African grey parrot, talks and whistles, and new bell-top cage, only 3l. 10s., a genuine bargain. "Chemists," 4 Harbour Street, Folkestone.

Materia medica cabinet, of 150 specimens, each in separate box, 5s.; 60 indigenous plants, mounted and named, 5s. Tully, Chemist, Tunbridge Wells.

5 cwt. excellent new English honey, in pots, 20 lbs. to 50 lbs. each, at 10d. per lb. Sample on receipt of two penny stamps. H. Jeffery, 110 Cheltenham Road, Bristol.

The *Chemist and Druggist* for 1875, 1876. What offers? Also a quantity of Donovan's Solution, 1s. per lb. Warwick, Chemist, Hartlepool.

Ten gross cuttaneerha sticks for tooth-stopping, 3rd size, 5s. gross, cash with order; send stamped envelope for sample. Lockwood, Chemist, Sheffield.

One displacement apparatus, 1 pint graduated, one 1 quart, both York glass, fig. 28, with glass taps. Offers solicited. Snowden, Hastings.

Attfield's "Chemistry," fourth edition; Balfour's "Elements of Botany," B.P., with addenda; Cook's "Botany;" what cash offers? Geo. Gowing, Reigate.

Minor Students, 50 questions asked of a successful candidate, 1s.; 20 prescriptions given to dispense at the Minor, 1s.; Hints how and what to study, by a successful student, 1s. "Minor," 4 Harbour Street, Folkestone.

Plate-glass, 5 2-ft. 9-in. by 2 ft. 1 in., 2 3-ft. by 2 ft. 9 in., 1 3-ft. 6-in. by 2 ft. 9 in.; two rolled rough plate for skylight, 3 ft. by 3 ft., and 2 ft. 5 in. by 2 ft. 8 in.; upright mahogany show-case, plate-glass front, 3 ft. 6 in. by 2 ft. 6 in.; wall glass case, grained, about 16 ft. by 9 ft., with movable shelves. What offers? Whole or part. H., Waddington Thornton, Bradford.

For sale immediately, Attfield's "Chemistry," Bentley's "Botany," British "Pharmacopoeia," "Selecta e Prescriptis," latest editions, quite new; no reasonable offer refused. Apply, Hughes, Llandysil, South Wales.

To Minor Students.—12 prescriptions given at the last examinations, 1ree for 6d.; Roscoe's "Chemistry," 1s. 6d.; "Manuscript Notes on Chemistry," 2s. 6d.; Balfour's "Botany," 9d. Minor, 4 Harbour Street, Folkestone.

4 doz. 1s. 1½d. Hudson's balsamic cough elixir, 6s. per doz.; 1 doz. 1s. 1½d. Bateman's drops, Dacey's (clean), 7s.; 2 lbs. oil theobromae, 2s. R. Stephenson, 21 Barkerend Road, Bradford, Yorks.

Fifty tins Scott's smoking mixture, 2s. 6d. size; 35 tins do. do., 1s. 3d. size; 36 boxes Scott's cigarettes, 2s. size; 36 boxes do. do., 1s. size; new; will take 6l. 6s. the lot. Matthews, Chemist, Ashby-de-la-Zouch.

A Bargain.—A complete set of efficient oxygen-hydrogen dissolving apparatus, suitable for brilliant public exhibitions; nearly new; cost over 30l., will take 20l. Further particulars given on receipt of stamped envelope. Address, B. Waddington, Thornton, near Bradford, Yorkshire.

Minor Students.—50 questions asked of a successful candidate at last Minor, 2s.; 30 prescriptions given to dispense at the Minor, 2s.; 50 illegible prescriptions, 2s. 6d.; 60 mounted indigenous plants, 5s. "Chemist," care of Mr. Edwards, London House, Petham, Canterbury.

A 6-ft. plate-glass counter case, as fig. 105 6l. 10s., a bargain; 4-ft. do., fig. 101, 90s.; 3 ft. 6 in., as fig. 100, 70s.; 3-ft. do. do., fig. 100, 60s.; 6 ft., as fig. 99, 6l. 10s.; 6 ft., fig. 98, 6l.; 8-ft. do. do., 8l.; 5 ft. 8 in., as fig. 41, 5l.; 4-ft. do., 4l. E. Natali, 213 Old Street, London, E.C.

"London Dispensatory," 21s., 3s. 6d.; Thomas's "Physic," 10th. 21s., 4s.; Blynod's "Materia Medica," 4s.; Copland's "Dictionary of Medicine," parts, costing 2l. 0s. 6d., 5s.; Turner's "Chemistry," 21s., 3s. 6d.; Bowman's "Medical and Practical Chemistries," 3rd; 13s., 5s. 6d., and 40 others; letters only. H. Preston, 21 Clarendon Square, N.W.

Nests of drawers, window enclosures, glazed cases, shop jars all sizes and colours show bottles, specie jars, store bottles, pill machines, and every requisite; also medical books, surgical instruments, toxicologists' show-cases, jars, &c., cheap to clear out. Handsome vase satin flowers, 2l.; sewing machine, 2l. 294 Old Kent Road.

Nine Winchester quart-shaped show-colour bottles, filed, cut-glass stoppers, 10 inches to shoulder; deal scroll-pattern counter-screen, mahogany-stained and varnished, panelled, and shaded gold letters "Prescriptions Dispensed," depth at centre 20 inches, at ends 13 to 16 inches, length 5 feet 7 inches, two shelves at back for pots. What offers? West, Dawlish.

Five petroleum tanks, 1 cwt. sulph. precip.
100 shop bottles, 28 lbs. rad. calumb., 2 lbs.
ext. papav., 4 lbs. coccos cacti, 7 lbs. pulv.
colocynth, 4 lbs. zinc acetat., 4 W. qts. spt
ammon. foetid, several W. qts. infusions,
tinctures, &c., 28 lbs. galle. carul., 9 yds.
emp. roborans on moleskin, ble. oleum
cajuput, 28 lbs. rad. belladon. Apply,
Harrison, Chemist, Trannere.

Lot of large oil cisterns, all sizes, from 60 to
120 gallons; about 150 second-hand glass
cases, all sizes, upright and flat, write
and state size required, and a list will be
sent and information given: about 2,000
ointment jars and material of all kinds for
druggists altering or fitting; the fittings of
a druggist and grocer second hand. R.
T. Minson, Shop Fitter, 15 St. Paul's Square,
Birmingham.

Thirty doz. shop rounds, 8s. 6d. doz., equal pro-
portion of each size; earboys, specie jars
fancy jars, figs. A and D, vases, silvered
plate-glass; stock bottles, black and
japanned caps, 1s. 6d. each; a quantity of
new pill machines, 3, 4, 5-grain, to cut 24.
16s. 6d. each; a number nests mahogany-
fronted drawers, glass knobs and gold labels,
from 2 ft. to 12 ft. long, 2s. 6d. per drawer.
E. Natali, 213 Old Street, London, E.C.

Four lbs. potas. iodid., 15s. 6d.; 100 lbs. senna,
3d.; 12 cwt. P. fennegreek, 2 doz. Wobclpton's
purifying pills, 1s. 1½d. (rather soiled) 7s. 6d.;
4 lbs. Brazil isinglass, 5s. 6d. good; 56 lbs.
pulv. anisi, 6d.; 56 lbs. sem. anisi, 4½d.;
100 lbs. sapo castil, 4d.; Keen's mustard,
1d. per lb. less than makers' prices; 84 lbs.
ultramarine blue, 8d.; cash or exchange;
opium, quinine, &c. Nicholson, 5 Ball Gate,
Lincoln.

Plate-glass sponge case, fig. 92, 5l.; desk and
case, fig. 39, 45s.; fig. 21, 70s., with silvered
plate-glass back; a very elaborate dispensing
screen, 7 ft. long, with a glass case at each
side, with looking-glass centre, with marble
slab in front, silvered plate-glass back to
case, equal to new, 8l. 10s., all plate-glass, a
bargain; a 6-ft. do. do., a 5-ft. do. do.,
6 ft. 6 in. do. do., several flat plate-glass
counter cases, very cheap. E. Natali, 213 Old
Street, London, E.C.

Suppository moulds for six, electroplated, 3s. 6d.;
pill machine, 18 pills, 10s.; Squire's "Com-
panion," 10th edition, 6s.; "British Phar-
macopœia," with appendix, 4s.; four pear-
shape show-bottles, 28 inches high, mahog-
any stands, spiral stoppers; 34 1-lb. lilac
ointment jars; quantity 20, 30 and 40-oz.
stoppered rounds, wide and narrow mouth;
labelled brown ½-lb. extract pots, japanned
covers; set brass pillar scales, on 20-inch
mahogany box, with drawer. Moore, Chemist,
Cheltenham.

Two 2 ft. 11 long, one 3 ft. long, one 4 ft. long,
one 5 ft. 10 long, one 6 ft. 4 long, one 9 ft. 3
long nests mahogany-fronted gold-labelled
shop drawers; one 3 ft. long, one 5 ft. long,
one 10 ft. long nests deal-stained mahogany-
fronted gold-labelled shop drawers; one
10 ft. long, one 12 ft. long, one 14 ft. long,
one 16 ft. long nests deal-stained mahogany-
fronted gold-labelled shop drawers with
lockers under, shelving and cornice above,
forming complete fittings 8 ft. 10 high;
one 10 ft. long, one 11 ft. long, one 12 ft.
long, one 15 ft. long nests mahogany-fronted
gold-labelled shop drawers with lockers
under, pillars, shelving, and cornice above,
forming complete fittings 8 ft. 10 high; one
3 ft. 6 long, one 2 ft. 7 long, one 6 ft. long,
one 9 ft. long, one 9 ft. 10 long, one 20 ft.
long mahogany wall cases with cupboards
under. Lloyd Rayner, 333 Kingsland Road,
London, N.

Two excellent label drawers, 10s., nearly new,
cost 16s. 6d. G. C. Giles, Leeds.

A 12-ft. nest of fittings, equal to new, as fig. 196,
glass knobs and gold labels, 18l.; a 12-ft.
run of 78 drawers; 10-ft. 6-in. mahogany-top
counter, 8-ft. do., 6 ft. do., 9-ft. do., 500-ft.
mahogany-fronted shelving, 12 ft. length, at
7d. per foot run; 7-ft. wall-case, fig. 200; 12-ft
run, deal, painted and grained mahogany
drawers, gold labelled, 7l.; wall case 4 ft.
long, 50s.; 8-ft., 9-ft., 10-ft. mahogany-top
cupboards, 15 in. wide, cheap; also 4 ft. 9 in.
and 4-ft. do., 14 in. wide. E. Natali, 213 Old
Street, London, E.C.

Post free:—Wills' "Preliminary Exercises with
Answers and Essays;" Morris' "English
Grammar;" Currie's "English Grammar;"
Isbister's "Cæsar," with Vocabulary; Ed-
wards' "English Composition;" Davies'
"Part Second Arithmetic and Key;"
Yonge's "Eton Latin Grammar;" "Henry's
First Latin;" Liddell's "Arithmetic and
Key;" Monteith's "First Latin Course," at
10d. each; Edwards' "Eton Latin Gram-
mar;" 100 Preliminary Lectures, written;
Giles' "Key to Cæsar;" "Cæsar Commen-
taries and Gallic War," at 1s. each; Leache's
Key to "Pharmacopœia and Prescription;"
Smith's "Principia Latina," at 1s. 6d. each.
"Alpha," 2 Prestbury Road, Macclesfield.

13 1-gall., 8 3 gall., 4 4-gall., 1 6-gall., 1 8-gall.
1 10-gall., 1 14-gall. pear-shape window car-
boys; 3 4-gall., 2 2-gall., 8 1-gall., 13 ½-gall.
upright window show bottles; 12 1-gall.,
25 2-gall. pear-shape store bottles, with gold
labels and japan caps; 94 1-gall. upright store
bottles, with japan caps; 24 gold-labelled,
drug store boxes; 17 handsome specie jars,
with royal arms, &c.; 40 handsome gold-
labelled show jars, as figs. A and D, Maw's;
60 1-lb. and 2-lb. juiube jars, as fig. 2
Maw's; 12 3-in. lozenge jars, with gilt tops;
600 secondhand shop jars, labelled; 24 4-lb.
brown earthenware shop jars, japan caps,
and gold labels; 18 6-lb. ditto, 24 12-oz.
ditto; 8 doz. 4-oz., 4 doz. 24-oz., 7 doz.
20-oz., 3 doz. 16-oz., 2 doz. 12-oz., 5 doz.
4-oz. secondhand gold-labelled shop bottles;
30 engraved acid bottles, 45 blue and green
syr. bottles, 8 doz. patent oil bottles; 2
40-gall., 4 10-gall. circular oil cisterns;
1 20-gall. circular paraffin cistern; 12 14-lb.
tea canisters, 6 112-lb. store canisters,
2 28-lb. French cisterns; tea, coffee, and
sugar mills, scales, pill machines, mortars
and pestles, tincture presses. Lloyd Rayner,
333 Kingsland Road, London, N.

One 4 ft. long, 1 4 ft. 2 in. long, 1 6 ft. long,
1 6 ft. 6 in. long, 1 7 ft. long mahogany
dispensing case screens; 1 2 ft. long,
1 2 ft. 7 in. long, 1 4 ft. 2 in. long, 1 4 ft. 6 in.
long, 1 5 ft. long upright mahogany counter
cases; 1 2 ft. long, 1 2 ft. 6 in. long mahog-
any upright counter cases, with desks;
1 2 ft. long, 1 2 ft. 6 in. long rail counter
desks; 2 desks with glass screens, 2 ft. 6 in.
long show case, as 43 Maw's; 8½ ft. long
plate-glass case, as 27 Maw's; 1 4 ft. long,
plate-glass case, as 95 Maw's; 1 5 ft. 6 in.
long flat plate-glass counter case, as 97
Maw's; 2 ft. 6 in. bent-glass counter case,
mirror door at back to open, 20s.; 3 ft. 4 in.
long, 20 in. wide flat mahogany counter
case, 15s.; 3 ft. 6 in. long, 18 in. wide ditto,
15s.; 3 ft. 3 in. long, 11 in. wide flat
mahogany counter case, 10s.; 3 ft. 5 in. flat
mahogany counter case, with sloping front
17 in. wide, 17s.; 2 bent-glass counter cases,
40s.; bent-glass tooth-brush case, as 72
Maw's; label chest, as 72 Maw's; quantity
mahogany-top counters, window enclosures,
&c. Lloyd Rayner, 333 Kingsland Road,
London, N.

To Chemists, Surgeons, Dentists.—6 Feunings'
lung healers, 1s. 1½d.; 3 Parr's pills; 3
Torren's pills; 1 Widow Welch's, 2s. 9d.;
2 Dr. Roberts' ointment, 1s. 1½d.; 1 Henry's
calcined magnesia, 2s. 9d.—8s. the lot;
homœopathic medicines (contents of 3l.
case), 20s.; neat new show case for same
10s.; dentist's show case, open sides, bent
glass top, tablet in gold ("Teeth for the
Million"), plate glass mirror back, 1 plate-
glass shelf, 3 ft. long by 1 ft. 10 in. deep,
2 ft. high at back, black framework, 28s.;
tooth forceps, upper, 2s. 6d. pair; upright
show-case, good condition, 3 movable
shelves, 3 ft. by 2 ft. 8 in., 40s.; scales,
brass, nearly new, agate balance, scoop pan,
14s.; 10 ½-gall. black bottles, tin caps, 6s.;
6 30-oz. N.M., gold labels, 5s.; 2 2-gall. car-
boys, 3s.; several printing presses cheap;
minor operation case, instruments new, 25s.;
dry cupping instrument in case, new, 10s.;
ear speculum, Maw's fig. 11, 5s.; "Throat
Hospital Pharmacopœia," 1s. 6d.; "Dis-
eases of Testes," 8 Curling engravings,
2s. 3d.; "Brouchitis" (Dr. Copland), 2s.;
Fergusson's "Surgery," engravings, 2s.;
"Diseases of Children" (West), 2s. 3d.;
"Diseases of Women" (Tilt), 1s. 6d.;
"Stricture" (Dr. Wade), 1s.; "Diseases of
Females" (Churchill), 1s. 6d.; "Tie" (Dr.
Hnnt), 1s. 6d.; "Throat Diseases" (Wag-
staffe), 1s. Exchange anything for Wobclp-
ton's 2s. 9d. and 7½d., rape oil, crushed lu-
seed. Adams, 20 Oxford Street, Salford.

FORMULÆ.

Essence of ginger, miscible in water without
turbidity, quite transparent, fine aroma and
pungency; price 6s. 24/215.

Glycerine jelly, very easy to make, and equal to
any in the market, beautifully clear, and
very softening; price 5s. 215/7.

Saponaceous liquid dentifrice, very pleasant and
useful, far in preference to powders or paste;
where introduced always used; price 5s.
7/215.

Condition powder for horses, recipe 2s.; cleans-
ing drenches for cows, 2s.; much approved,
and command a great sale. "Medicus," 4
Harbour Street, Folkestone.

Gonorrhœa mixture, a most valuable remedy,
never known to fail, will send recipe, with
full directions, on receipt of 2s. 6d. in stamps.
"Medicus," 4 Harbour Street, Folkestone.

Shepherd's red pectoral balsam, for coughs, cold,
bronchitis, &c., very effectual, half-profit
recipe and full directions on receipt of 2s. 6d.
"Medicus," 4 Harbour Street, Folkestone.

Chilblains, a most valuable remedy, never fails,
totally different from the ordinary remedies;
a 6d. article, bears an immense profit. I sell
several dozen during the season; a chemist
in a large town may sell several gross. The
recipe for 2s. 6d. Chant, Chemist, Langport,
Somerset.

Furniture paste, very superior, cleans and puts a
brilliant gloss on polished or other furniture,
&c., 2s. 6d.; baking powder (original), worth
10s., 2s. 6d. The excellence of these pre-
parations secures for them a good sale. Re-
ference or sample post free. H. Hare, 81
South Street, Goolc.

WANTED.

A pessary mould, 18/217.

Hanbury and Flickiger's "Pharmacographia,"
26/214.

2 dozen wide-mouth stoppered bottles, 40-oz.
H., 196 Union Street, Oldham.

12-gallon and 50-gallon oil drums, with taps,
Rowell, Houghton-le-Spring, Durham.

Dental lathe for wheels and brushes; good con-
dition; cheap. Dens, 4 Ironmonger Row,
Coventry.

Dr. Tanner's "Manual of the Practice of Medicine;" 4th edition. T. Perkin, 36 High Town, Hereford.

Herbarium for Minor Student, will buy, hire, or exchange; please name contents. Walker, March, Canals.

Bentley's "Botany," Fowles' "Chemistry," Attfield's "Chemistry," cheap. "Nemo," 21 Gloucester Road, South Kensington.

Four specie jars, height 24 without lid; also four shop chairs and mahogany counter desk. Sharp, Chemist, Sunderland.

Attfield's "Chemistry," Southall's "Materia Medica Cabinet," both perfect and latest editions. "Sigma," 344 High Street, Lincoln.

A quantity of brown jars, with flat lids, about 1 gallon, must be cheap; also store boxes for drugs. J. Clark, 77 West Street, Sheffield. Set of teeth forceps; pill machine to cut 3 and 5 grain; bent glass show-case, 3 or 4 feet long, 8 in. wide. Asquith, Druggist, Colac. Extracting forceps, scaling and stopping instruments, treadle wheel for dental lathe, full sizes. J. R., 41 Camden Road, London, N.W. A first-class hydraulic press, with fittings complete, to hold about 30 gals. Cash price and particulars to W. Aviss, 9 High Street, Coventry.

A number of 32-oz. shop bottles and syrup bottles, stoppered; also a few ointment jars, in good condition. George Best, chemist, Darlington.

A few copies of *The Chemist and Druggist* for February and June, 1878. Must be complete and clean; 8d. for each copy will be remitted for the first six of each received. Publisher, *Chemist and Druggist*, 44A Cannon Street, London, E.C.

INFORMATION WANTED.

The address of makers of spread-plaster machines. 46/228.

Receipts for a first-class black writing ink that will flow freely and dry quickly, an intense black or violet ink, a first-class copying ink, also a chemical essence Bonnet of undoubted reliability; a liberal price will be paid for all or any of above. 16/218.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

Acoustic Apparatus.—No. 4319.—W. A. McKeown, of Belfast, Ireland, Doctor of Medicine and Master in Surgery. Improvements in acoustic apparatus. Dated October 28, 1878.

Alkali.—No. 4148.—J. C. Stevenson, M.P., alkali manufacturer, of South Shields, Durham. Improvements in apparatus for the manufacture of alkali. Dated October 18, 1878.

Alkalies.—No. 4188.—E. W. Parnell, of Liverpool, manufacturing chemist. Improvements in the manufacture of alkalies. Dated October 21, 1878.

Ammoniacal Liquor.—No. 4353.—J. Imray.—A communication from H. J. E. Henaebatte, of Anglet, near Bayonne, France, and C. J. F. R. de J. Mesnard, Vicomte de Vanreal, of Biarritz, France. Improvements in the treatment of ammoniacal liquor for the separation of ammonia compounds therefrom. Dated October 29, 1878.

Bandages.—No. 4342.—H. Statham, of Manchester. Improvements in bandages to be worn on the human body. Dated October 29, 1878.

Bottle-stand.—No. 4012.—G. Betjemann, G. W. Betjemann, and J. Betjemann, all of Pentonville Road, London. Improvements in stands for decanters, bottles, and jars, which improvements are specially applicable to spirit, liqueur, and scent-bottle stands. Dated October 10, 1878.

Caustic Drums.—No. 4226.—W. H. Colby, of Widnes, Lancashire. Improvements in and appertaining to drum-beads or lids for caustic drums and other receptacles for like purposes. Dated October 23, 1878.

Cleaning Casks.—No. 4420.—J. C. Copley, of Nottingham, analytical chemist. An improved process for cleansing and purifying foul and musty casks or barrels. Dated November 1, 1878.

Colouring Matters.—No. 4228.—W. Spence.—A communication from A. Herran, of Paris, mining engineer, and A. Chaudé, of Yverres, Seine et Oise, France, chemist. Improvements in the mode of producing certain colouring matters. Dated October 23, 1878.

Disinfectant.—No. 4311.—R. E. Colbert, of Old Ford, Road, London. An improved disinfecting powder or composition. Dated October 26, 1878.

Essence of Ginger.—No. 4257.—T. Parker, of Bridge Street, York, chemist and druggist. Extracting the aroma and pungency from ginger, without extracting the resin therefrom, and for extracting the resinous principles from essence of ginger, and for dissolving out of oil its unpalatable principles. Dated October 24, 1878.

Food for Infants and Invalids.—No. 4102.—E. J. Splitta, of Clapham Common, Surrey. A new or improved food for infants and invalids. Dated October 31, 1878.

Hardening Water.—No. 4170.—J. C. Copley, of Nottingham, analytical chemist. An improved process for rendering water permanently hard. Dated October 19, 1878.

Manufacturing Soda-ash.—No. 3973.—G. Glover, of Carville Chemical Works, Wallsend, Northumberland, chemical manufacturer. A new or improved mode or method of destroying or removing deleterious compounds formed during the process of manufacturing soda-ash, such compounds being cyanogen compounds, sulphides and hyposulphites of soda. Dated October 9, 1878.

Medicinal Compounds.—No. 4192.—P. E. Lockwood, of 24 Holborn Viaduct, London. New or improved medicinal compounds of extract of malt. Dated October 21, 1878.

Obtaining Compounds from the Seeds of Gramineæ.—No. 4301.—H. Simon.—A communication from Dr. G. Kühnemann, of Dresden, Germany. An improved process of extraction for obtaining sugar phytolocomine (soluble albumen), phytodermatose and other substances or compounds from the seeds of gramineæ, and the apparatus employed for and in connection with such process. Dated October 26, 1878.

Oxide of Zinc.—No. 4401.—W. Blanford, of Old Ford, London. Improvements in the preparation of oxide of zinc, and in its manufacture into paint. Dated October 31, 1878.

Plumbago Crucibles.—No. 3992.—Improvements in the manufacture of plumbago crucibles and other vessels in plumbago suitable for chemical and metallurgical purposes. Dated October 9, 1878.

Potassa and Soda Carbonates.—No. 3967.—J. Imray.—A communication from the Société Anonyme de Croix, of Croix, near Roubaix, France. Improvements in the manufacture of potassa and soda carbonates from potassium and sodium chlorides. Dated October 9, 1878.

Sulphuric Acid.—No. 4131.—C. Norrington, of Plymouth, Devonshire. Improvements in apparatus employed in the manufacture of sulphuric acid. Dated October 17, 1878.

Surgical Dressings.—No. 3921.—A. Ford, of 2 Crepingham Road, Lewisham. Improvements in surgical dressings. Dated October 5, 1878.

Washing Bottles.—No. 4051.—F. G. Riley, of South Lambeth Road, London, engineer. Improvements in washing bottles or other similar receptacles, and in the machinery or apparatus employed therein. Dated October 12, 1878.

Letters patent have been issued for the following:—

Analytical Palette of Oils.—No. 1597.—H. Ronaix, of Paris, merchant. An analytical palette of oils. Dated April 20, 1878.

Bottle-stoppers.—No. 1601.—F. B. Michell, of Plymouth, Devonshire. Improvements applicable to stoppering bottles for facilitating the discharging and filling of same and cleaning them. Dated April 20, 1878.

Bottle-stoppers.—No. 1536.—H. H. B. Johnson, of Dowgate Hill, London, merchant. Improvements in stoppering, closing, or covering bottles, jars, casks, and other like receptacles. Dated April 17, 1878.

Bottles and Stoppers.—No. 3312.—J. Rivers, auctioneer, of 27A Finsbury Square, London. Improvements in stoppers and bottles for containing any kind of liquids, aerated water, gaseous or otherwise. Dated August 22, 1878.

Bottle-stoppers.—No. 1853.—R. J. Smith, of Manchester. Improvements in closing or stoppering glass and other bottles, and in tools for making the same. Dated May 8, 1878.

Bottle-stoppers.—No. 1929.—W. R. Lake.—A communication from C. O. Hammer, of Pittsburg, Penn., United States. Improvements in bottle-stoppers. Dated May 14, 1878.

Bottle-stoppers.—No. 3111.—G. Belleini, of Barnsley, Yorkshire. Improvements in stoppers for bottles. Dated August 7, 1878.

Carbonate of Soda.—No. 2130.—S. Pitt.—A communication from T. Schloosing, of 67 Quai d'Orsay, Paris. Improvements in the manufacture of carbonate of soda by the ammonia process. Dated May 28, 1878.

- Determining Organic Matters.**—No. 1504.—J. A. Wanklyn, professor of chemistry, and W. J. Cooper, analytical chemist, both of Westminster Chambers, Westminster, London. Improvements in the method of determining organic matters contained in solutions. Dated April 15, 1878.
- Filling Bottles, &c.**—No. 3210.—T. H. Duckworth and S. Wright, both of Oldham, Lancashire, soda water manufacturers. Improvements in the construction of apparatus for filling bottles with aerated waters, and for indicating the amount of pressure and registering the quantity of work performed. Dated August 14, 1878.
- Glass Bottles.**—No. 3112.—S. Canning, of 7 Great Winchester Street Buildings, Knight. Improvements in the manufacture of glass bottles. Dated August 7, 1878.
- Horse and Cattle Foods.**—No. 1933.—A. M. Clark.—A communication from J. Barthe, of Paris. Improvements in horse and cattle foods. Dated May 14, 1878.
- Muriate of Ammonia.**—No. 2224.—W. Gentles, of St. Helens, Lancashire, analytical chemist. Improvements in the production of muriate of ammonia. Dated June 3, 1878.
- Recovering Indigo.**—No. 1612.—F. Wirth.—A communication from F. V. Kallah, chemist, of Wiese, Austria. Improvements in the method of recovering indigo, which method is also applicable for other purposes. Dated April 22, 1878.
- Soap.**—No. 1486.—W. R. Lake.—A communication from J. Hilgers, of Rheinbrohl, Germany. Improvements in the manufacture of buoyant or floating soap. Dated April 13, 1878.
- Solid Lye.**—No. 1899.—A. C. Henderson.—A communication from C. M. Levy and G. Alexandre, chemical manufacturers. An improved solid lye for washing and bleaching linen. Dated May 11, 1878.
- Sulphate of Ammonia.**—No. 3257.—F. C. Hills, of the Chemical Works, Deptford, Kent, manufacturing chemist. Improvements in the manufacture of sulphate of ammonia and apparatus to be used in the said manufacture. Dated August 17, 1878.
- Sulphate of Lime.**—No. 1874.—F. J. Cheesbrough.—A communication from C. T. Tomkins, of New York, United States. An improved form of sulphite of lime and a special process for the preparation of the same, to be used as an element in the composition of paper and the finishing of cotton goods, and as a substitute for terra alba, clay, and other substances now employed in the manufacture of paper and other goods. Dated May 9, 1878.
- Surgical Gloves.**—No. 1532.—T. Forster, of the Indianrubber Works, Streatham, Surrey. Improvements in the manufacture of gloves or coverings for the hands, for use in surgical or other operations where it is essential to cover the hands, yet retain delicacy of touch. Dated April 17, 1878.
- Zinc Oxide.**—No. 3237.—E. A. Parnell, of Swansea, Glamorganshire. An improved process for manufacturing zinc oxide. Dated August 16, 1878.

Specifications published during the month :—

Postage 1d. each extra.

1878.

779. C. Eskrett and W. H. Searle. Wrappers or envelopes for seed-crushing and oil-cake making. 4d.
856. E. W. Inglis. Covers and stoppers for cans, bottles, &c. 2d.
874. W. Wharldale. Bottles for aerated liquids. 6d.
886. F. Wirth. Purifying gum, resinous oils, &c. 4d.
891. J. Barrow. Manufacturing ammoniacal salts. 4d.
901. A. Browne. Filter presses. 8d.
907. E. S. Gunn. Filters. 6d.
923. M. Staepoole. Bottles. 2d.
925. E. C. Roettger. Filtering presses. 6d.
934. J. B. Mackoy and J. Sellers. Soap. 2d.
945. C. B. Cooper and C. W. Cooper. Soap. 2d.
955. G. W. Von Nawrocki. Manufacture of sulphur from soda residues, &c. 4d.
961. L. Robinson. Invalid and other couches. 6d.
971. J. Daddy. Manufacture of lard, &c. 2d.
989. G. Jennings and G. J. Hinde. Filters. 4d.
1006. A. J. Bernays. Filters. 4d.
1010. J. Carter. Invalid couches and bedsteads. 8d.
1011. J. H. Johnson. Filtering apparatus. 6d.
1117. W. L. Wise. Producing dyes from products of madder and tar. 4d.
1082. J. Hammond. Steam spray producers for surgical purposes, &c. 2d.
1084. W. J. Blinkhorn. Manufacture of sulphuric acid. 4d.
1123. H. Rawlings. Filter presses. 2d.
1127. R. Powell. Freezing apparatus. 2d.
1136. W. L. Wise. Production of sulphate of ammonia from the nitrogen of marshy moors, &c. 10d.
1148. W. E. Newton. Manufacturing sulphocyanides and ferrocyanides. 6d.
1154. H. Rawlings. Filters. 2d.
1186. C. N. May. Treating oily and fatty matters. 6d.
1201. R. Messel. Production of monohydrated sulphuric acid. 2d.

1201. T. Davies and W. H. Staepoole. Bottle or vessel containing two or more fluids in various proportions. 2d.
1211. J. Warne. Stopping bottles. 2d.
1259. J. T. Willett. Bottle-corking machines. 2d.
1281. C. Leech and T. Neale. Calcining sulphate of iron, &c., for the manufacture of pigments, &c. 6d.
1297. H. J. Haddan. Inhalers. 2d.
1298. E. C. Prentice. Filter presses. 6d.
1307. L. Rose. Bottling machine for aerated waters. 2d.
1324. W. W. Rolston. Apparatus for diffusing liquids. 2d.
1705. H. Simon. Process and apparatus for developing bromine. 6d.
2217. W. R. Lake. Manufacture of tablets, cakes, or blocks of camphor. 2d.
3005. L. J. Dart. Compound and process for the cure of cancers, corns, &c. 2d.
3109. S. Pitt. Evaporating saline solutions. 6d.



BANKRUPTS.

- KEATING, THOMAS H., Grand Parade, Cork, pharmaceutical chemist. October 15.
- STANING, WILLIAM, 55 Cogan Street, Hull, chemist. October 30.

LIQUIDATIONS.

- ADDISON, ROBERT, 2 Oxford Place, Scarborough, surgeon's assistant. October 29.
- BAILEY, JOSEPH, Hanover Street, Burslem, soda-water manufacturer. October 25.
- DAVENPORT, GEORGE ALDERSEY, 8 Queen's Square, and Chapel Ash, Wolverhampton, chemist and druggist. October 9.
- EVANS, FRANCIS, 1 Walter Street, Bethnal Green, mineral-water manufacturer, late 246 Devonshire Street, Mile End, cork manufacturer. October 21.
- FLETCHER, WILLIAM, JUN., Church Bank, Pateley Bridge, chemist. October 17.
- HIGGINBOTTOM, JOSEPH, 265 Stockport Road, Levenshulme, late Simmondley Springs, Glossop, manufacturer of mineral waters. October 14.
- JOHNSTON, JAMES COUPER, Gwar-y-Castell, Crickhowell, Brecon, medical practitioner. October 8.
- MARSH, JOHN, Lea Green, and Parr Alkali Works, both near St. Helen's, chemical manufacturer. October 18.
- MITCHELL, SAMUEL, Temple Street, Halifax, late Kelghley, dentist. October 18.
- OULTON, WILLIAM PETERS, Thnstill, chemist. October 11.
- PHILLIPS, GEORGE SEPTIMUS, 5 Earl Street, Coventry, chemist. October 12.
- RYLEY, HENRY, 5 St. Paul's Street North, late The Dispensary, Oxford Passage, Cheltenham, physician and surgeon. October 28.
- SARGENT, GEORGE PEARSE, 9 Dorrell Place, late 364 Brixton Road, M.D. October 17.
- URMSTON, HUGH, Market Street, Warrington, manufacturer of mineral waters. October 17.
- WALKINTON, WILLIAM MARMADUKE, Barnstable, late Tenby, chemist and photographer. November 1.

DIVIDENDS.

- CHALLONER, JOHN, & SONS, 32 Providence Place, Brighton, and 63 Preston Road, Preston, aerated water manufacturers. 1st and final, of 5s.; on and after October 19. G. L. Fenner, 12 Bond Street, Brighton.
- DOWLING, JOHN, 56 Rodney Street, Liverpool, hydropathist. 1st and final, of 7d.; any Wednesday. H. Bolland, 10 South John Street, Liverpool.

PARTNERSHIPS DISSOLVED.

- ATHERTON & Co., Alfreton Road, Nottingham, mineral water manufacturers. October 14. Debts by S. Hancock, silk agent, Friar Lane, Nottingham.
- EDWARDS & HEYGATE, Crediton, Devon, surgeons. September 29.
- HAYES, W. A. & W., 12 Grafton Street, Dublin, druggists. June 30. Debts by W. Hayes.
- MUNRO, W. & S., chemical manufacturers, Dundee. June 29. Debts by Stuart Munro, who continues under the same firm.
- PROTT & CHALMERS, dispensing chemists, 12 Gordon Street, Hantley. October 19. Debts by George Chalmers, who continues under the same firm.



NO improvement can be reported in the general condition of trade. The recent financial disturbances have induced a considerable degree of caution and distrust, and on all hands there is evidence of limitation of business.

The Board of Trade returns again repeat the same story. The exports for October, 1878, are more than a million sterling less than those of October, 1877, and both "alkali" and "chemical products" figure in the list of commodities which contribute to the decline.

Soda crystals are again quoted lower, though there is a fairly active demand. Ash and bicarb. are steady at previous prices. Bleaching powder remains at 5s. 9d. to 6s. landed, and is bought rather freely. Citric acid has declined, and has been sold at 2s. 0½d.; tartaric is steady at 1s. 5d.; cream of tartar fluctuates between 100s. and 103s.; carbonate, sulphate, and muriate of ammonia, are all in fair demand at unchanged values. Potash salts are unaltered in price. Sugar of lead is scarce, and rather freely bought at 34s. for foreign and 38s. for English make.

Quicksilver has lost 2s. 6d., and we notice reports in the American journals that the Californian product is being sold at under the published quotations and exported to China in large quantities.

Quinine is again dearer, and, on the strength of reports of a cinchona famine, it is predicted in some quarters that a repetition of last year's extreme prices is coming upon us. There seems to be a deficiency in the supply of good quinine-yielding cinchonas, but it has not much affected the price of barks generally. The main cause of the advance is the comparative exhaustion of foreign stocks in consequence of Government orders and the resulting extra strain on English makers. This causes the chief of the former to be now selling at higher prices than the first English brands.

Camphor is very firmly held, and has marked a further advance. Refiners' price is now 1s. 5d. When the stock is compared with that of last year the reason of this will be obvious.

Otto of roses is now being offered at specially low prices, and good judges might venture on a small stock of this product. English oil of peppermint is also lower than usual, and last crop is said to be of fine quality. Lavender oil (new crop) is fine in quality, but very limited in quantity, and will consequently be dear.

The opium market is very dull, and there does not seem any immediate probability of the advance which was so lately predicted.

Cubebs are again on the market, bringing high rates. Jalap is also dearer, some "cornering" movement being attempted on the part of certain speculators. Colombo root has advanced, but sarsaparilla is cheaper. New stocks of honey are coming in the market, and we are told that the quality is very good and supply fair.

The oil market has been singularly dull, and prices have dropped almost all round. Linseed has fallen about 30s. per tun; rape to fully the same extent; cottonseed about 20s., while seal and sperm have declined even more than this. Spanish olive oil is on the market, and is offered at 1½ lower than last month, but finds few purchasers. The new crop of Italian is no doubt a very abundant one, but holders of old stocks resist this fact to the uttermost. Turpentine is also 1s. less per ewt., and petroleum shows a further decline for the month, though it now stands fractionally higher than its lowest point, as little as 7d. having been accepted a week ago. December sales are being made at 7½d., and January-February at 7¾d. A circular recently issued by Messrs. W. H. Samuel & Co., of Liverpool and New York, predicts a long continuance of these low prices for petroleum. The writer explains that the oil well district is divided into "upper" and "lower" districts, the former including the "Bradford" district, of which very large tracts remain yet to be tapped, and in which all the wells are "flowing wells," and the oil runs out without pumping. In the lower district all the oil requires to be laboriously pumped out at considerable expense for steam-

engine, fuel, labour, &c., and cannot therefore be carried on to a paying profit at the present unprecedently low price, whereas the flowing wells when once started require no further expense, and the oil is mostly run underground through pipes, straight from the well to the refinery, at merely nominal cost, so that, even at present prices, they realise very handsome profits. The cost of the crude oil at the wells is now 80c., or 3s. 4d., per barrel. The cost of barrels, waste products, refining, brokerage, interest, and railway carriage is carefully and correctly estimated at 11s. 10d. per barrel, which would give a cost in New York of the refined oil of 15s. 2d. per barrel, to which adding the refiner's profit of 3s. 10d. per barrel (of 48 American gallons) would give a cost, here, of about 8½d. per gallon, yielding a profit to every one concerned; and, as the Bradford district is stated to be able to produce sufficient for the requirements of the whole world for a length of time in a future to which there is yet no basis for naming a limit, there would appear to be every prospect of a long continuance of the present range of prices, only qualified by the possibility of the refiners' combination using their power of at any moment establishing, speculatively, a temporary advance, which, no doubt, they will do, whenever they consider that the position of the producing districts, or of the markets of the world, is such as to insure their getting out with a profit, of which, however, at present there are no visible indications.

	Oct. 31 Stocks		Oct. 31 Imports		Oct. 31 Deliveries	
	1878	1877	1878	1877	1878	1877
Aloes.....cs	1,803	2,036	2,381	1,933	2,619	2,261
".....kgs	12	20	3	—	5	5
".....gourds	736	2,631	469	2,903	2,042	1,931
Aniseed, Star.....cbts	816	1,082	758	263	893	911
Arrowroot.....cks	16,113	14,061	14,090	14,858	11,297	10,603
".....bxs & tins	7,169	6,647	8,313	9,243	7,718	6,780
Balsam.....cks, &c.	144	342	245	490	279	504
Bark, Medicinal.....cks, &c.	793	1,153	1,871	3,298	2,247	2,295
".....srns, &c.	10,477	10,378	36,393	23,581	36,712	21,879
Borax.....pkgs	1,115	1,031	862	429	781	799
Bees' Wax.....bls & srns	504	485	462	299	512	228
".....cks & cs	1,726	1,390	1,795	2,117	1,439	1,697
".....cakes	304	48	457	188	161	259
Wax Japan vegetable pkgs	4,640	6,752	876	5,430	2,550	6,210
Camphor.....pkgs	1,305	6,979	4,244	5,710	7,444	5,138
Cardamoms.....chts	318	636	336	490	589	685
Cocculus Indicus bgs, &c.	1,780	2,479	234	554	890	464
Colombo root.....pkgs	529	619	150	375	288	472
Cream of Tartar.....cks	88	80	226	213	250	226
Cubebs.....bgs	170	352	30	122	154	60
Dragonsblood.....chts	101	126	137	197	174	131
Galls, E.I.....cks & cs	7,638	4,759	9,344	7,306	4,948	4,546
Mediterranean.....sks	953	122	1,544	1,088	1,205	905
Gum—						
Ammoniac.....pkgs	479	496	131	184	137	176
Animi & Copal.....	7,379	8,724	4,996	10,401	5,757	6,498
Arabic, Barbary.....	1,170	1,221	2,014	2,548	1,868	2,833
Turkey.....	391	269	1,056	1,064	1,138	1,077
E.I.....	1,858	2,256	4,322	3,032	4,633	2,892
Assafoetida.....	298	401	286	467	293	418
Benjamin.....	960	1,059	1,391	1,615	1,395	1,153
Damar.....	1,395	1,222	2,720	1,744	2,418	2,676
Galbanum.....	19	35	—	15	16	12
Gamboge.....	183	189	327	274	310	291
Guaiacum.....	20	35	138	159	154	133
Kino.....	15	14	12	5	9	9
Kowrie.....tns	969	944	1,399	1,423	1,430	1,288
Mastic.....pkgs	172	113	95	26	47	23
Myrrh, E.I.....	255	287	202	428	212	393
Olibanum.....	1,337	3,774	6,547	8,119	8,167	5,794
Sandarac.....	974	223	1,839	1,020	1,343	1,313
Senegal.....tns	19	10	14	2	5	10
Tragacanth.....pkgs	935	234	2,173	806	1,435	638
Ipecacuanha.....cks & bgs	295	265	647	471	664	369
Jalap.....bls	436	16	166	343	267	377
Nux Vomica.....pkgs	5,580	1,642	7,093	1,771	2,767	1,637
Oil—						
Castor.....cks	—	—	—	4	7	4
".....cs	3,435	4,935	15,327	14,318	15,414	14,835
Palm.....tns	609	282	1,755	1,812	1,751	2,067
Cocconut.....	1,208	2,461	4,264	8,768	5,922	9,142
Olive.....cks, &c.	600	1,548	2,460	5,883	3,182	4,301
Aniseed.....cs	58	366	461	575	621	428
Cassia.....	570	870	7	703	155	235
Opium.....chts, &c.	1,197	1,270	—	—	—	—
Rhubarb.....chts	1,246	1,097	1,691	1,625	1,463	1,476
Sarsaparilla.....bls	928	1,106	1,707	2,270	2,004	2,079
Senna.....bls, &c.	1,691	3,448	1,150	4,281	2,699	3,364
Shellac.....cs, &c.	43,754	37,367	33,465	38,124	29,379	27,636
Terra Japonica, Gambier tns	3,086	1,824	12,970	7,069	11,669	6,182
Cutch.....	3,516	2,364	3,868	2,038	2,653	2,963
Turmeric.....	1,012	988	2,708	1,958	2,772	1,596

Monthly Price Current.

Prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

HEMICALS.		1878.		1877.	
ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 2½	to 0 0	0 2½	to 0 0
Citric	"	2 0	.. 2 1	2 2½	.. 2 3
Hydrochloric	per cwt.	5 0	.. 7 0	4 0	.. 7 0
Nitric	per lb.	0 4½	.. 0 0	0 4½	.. 0 0
Oxalic	"	0 4½	.. 0 4½	0 5	.. 0 0
Sulphuric	"	0 0½	.. 0 1	0 0½	.. 0 1
Tartaric crystal ..	"	1 5	.. 1 5½	1 5	.. 0 0
powdered ..	"	1 5	.. 1 5½	1 5	.. 0 0
ANTIMONY ore	per ton	240 0	.. 300 0	240 0	.. 300 0
crude ..	per cwt.	32 6	.. 0 0	37 0	.. 0 0
star	"	50 0	.. 0 0	48 0	.. 0 0
ARSENIC, lump	"	25 0	.. 0 0	25 0	.. 25 6
powder	"	8 0	.. 9 0	8 3	.. 0 0
BRIMSTONE, rough ..	per ton	110 0	.. 115 0	105 0	.. 120 0
roll ..	per cwt.	9 6	.. 10 3	9 6	.. 10 6
flour	"	11 6	.. 13 6	11 6	.. 13 6
IODINE, dry	per oz.	1 0	.. 0 0	0 10½	.. 0 0
IVORY BLACK, dry ..	per cwt.	8 6	.. 0 0	8 6	.. 0 0
MAGNESIA, calcined ..	per lb.	1 10	.. 0 0	1 10	.. 0 0
MERCURY	per bottle	135 0	.. 0 0	147 6	.. 0 0
MINIUM, red	per cwt.	18 3	.. 18 6	22 3	.. 0 0
orange ..	"	29 6	.. 0 0	33 0	.. 0 0
PRECIPITATE, red ..	per lb.	3 5	.. 0 0	3 8	.. 0 0
white ..	"	3 4	.. 0 0	3 7	.. 0 0
PRUSSIAN BLUE ..	"	0 0	.. 0 0	0 0	.. 0 0
SALTS—					
Alum	per ton	130 0	.. 137 6	142 6	.. 145 0
powder	"	142 6	.. 0 0	155 0	.. 157 6
Ammonia:					
Carbonate	per lb.	0 6½	.. 0 6½	0 5½	.. 0 5½
Hydrochlorate, crude,					
white	per ton	600 0	.. 720 0	560 0	.. 720 0
British (see Sal Am.)					
Sulphate	per ton	385 0	.. 395 0	400 0	.. 415 0
Argol, Cape	per cwt.	75 0	.. 82 0	75 0	.. 95 0
Red	"	52 0	.. 70 0	67 0	.. 74 0
Oporto, red ..	"	32 0	.. 32 6	33 0	.. 0 0
Sicily ..	"	60 0	.. 65 0	63 0	.. 65 0
Ashes (see Potash and Soda)					
Bleaching powd.	per cwt.	5 9	.. 6 0	6 3	.. 0 0
Borax, crude	"	27 0	.. 30 0	27 0	.. 38 0
British refined ..	"	35 0	.. 37 0	40 0	.. 0 0
Calomel	per lb.	3 0	.. 0 0	3 3	.. 0 0
Copper:					
Sulphate	per cwt.	18 3	.. 18 6	20 0	.. 20 6
Copperas, green ..	per ton	50 0	.. 55 0	55 0	.. 60 0
Corrosive Sublimate ..	p. lb.	2 5	.. 0 0	2 8	.. 0 0
Cr. Tartar, French, ..	p. cwt.	102 0	.. 103 0	103 0	.. 0 0
brown ..	"	80 0	.. 0 0	90 0	.. 0 0
Epsom Salts	per cwt.	4 3	.. 6 0	4 3	.. 6 0
Glauber Salts	"	3 0	.. 4 6	3 0	.. 4 6
Limbe:					
Acetate, white, ..	per cwt.	11 0	.. 20 0	11 0	.. 20 0
Magnesia: Carbonate ..	"	47 6	.. 0 0	47 6	.. 0 0
Potash:					
Bichromate	per lb.	0 4½	.. 0 5	0 3½	.. 0 4
Carbonate:					
Potashes, Canada, 1st					
sort	per cwt.	22 6	.. 23 0	21 6	.. 23 0
Pearlashes, Canada, 1st					
sort	per cwt.	33 6	.. 0 0	33 0	.. 0 0
Chlorate	per lb.	0 6½	.. 0 6½	0 8½	.. 0 8½
Prussiate	"	0 11	.. 0 11½	0 10½	.. 0 11
red ..	"	1 7½	.. 1 8	0 0	.. 0 0
Tartrate (see Argol and Cream of Tartar)					
Potassium:					
Bromide	"	2 6	.. 0 0	0 0	.. 0 0
Chloride	per cwt.	6 6	.. 0 0	0 0	.. 0 0
Iodide	per lb.	15 0	.. 0 0	14 0	.. 0 0
Quinine:					
Sulphate, British, in					
bottles	per oz.	11 8	.. 0 0	12 0	.. 0 0
Sulphate, French ..	"	12 0	.. 12 3	11 6	.. 11 9
Sul Acetate	per lb.	0 6½	.. 0 7	0 7	.. 0 7½
Sal Ammoniac, Brit. cwt.	"	44 0	.. 45 0	44 0	.. 45 0
Saltpetre:					
Bengal, 6 per cent, or					
under	per cwt.	19 6	.. 20 0	22 0	.. 22 6
Bengal, over 6 per cent,					
per cwt.	"	18 6	.. 19 3	20 6	.. 21 6
British, refined ..	"	24 0	.. 25 0	25 0	.. 27 0
Soda: Bicarbonate, p. cwt.	"	9 6	.. 0 0	10 6	.. 0 0
Carbonate:					
Soda Ash ..	per deg.	0 1½	.. 0 0	0 1½	.. 0 0
Soda Crystals ..	per ton	65 0	.. 0 0	72 6	.. 75 0
Hypo-sulphite, ..	per cwt.	0 0	.. 0 0	0 0	.. 0 0
Nitrate	"	13 6	.. 14 9	15 0	.. 15 3
SUGAR OF LEAD, White cwt.	"	34 0	.. 0 0	37 6	.. 38 0
Brown, cwt.	"	26 6	.. 0 0	26 6	.. 0 0
SULPHUR (see Brimstone)					

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VERDIGRIS		s. d.	s. d.	s. d.	s. d.
per lb.		1 1	to 1 5	1 1	to 1 5
VERMILION, English ..	"	2 8	.. 0 0	2 8	.. 0 0
China ..	"	2 6	.. 0 0	2 2	.. 0 0
DRUGS.					
ALOES, Hepatic	per cwt.	80 0	.. 163 0	70 0	.. 183 0
Socotrine ..	"	75 0	.. 200 0	85 0	.. 220 0
Cape, good ..	"	48 0	.. 50 0	49 0	.. 51 0
Inferior ..	"	40 6	.. 48 0	41 0	.. 43 0
Burbaodes ..	"	60 0	.. 190 0	41 0	.. 181 0
AMBERGRIS, grey	oz.	80 0	.. 85 0	80 0	.. 85 0
BALSAM—					
Canada	per lb.	0 8	.. 0 8½	1 0	.. 0 0
Capivi	"	1 3½	.. 1 6½	1 5	.. 1 6
Pera	"	5 0	.. 0 0	4 10	.. 0 0
Tolu	"	3 0	.. 3 6	6 0	.. 6 2
BARKS—					
Canella alba	per cwt.	24 0	.. 30 0	18 0	.. 22 0
Cascarilla	"	17 0	.. 24 6	15 6	.. 23 0
Pera, crown & grey ..	per lb.	1 2	.. 2 8	1 6	.. 3 1
Calisaya, flat ..	"	2 4	.. 4 6	3 6	.. 4 6
" quill ..	"	4 0	.. 7 0	4 6	.. 7 0
Carthage ..	"	2 3	.. 4 6	1 9	.. 3 5
Columbian ..	"	1 6	.. 6 4	1 6	.. 5 0
E. I.	"	1 6	.. 3 0	1 2	.. 4 0
" good & fine ..	"	3 6	.. 7 0	4 8	.. 7 3
Pitaya	"	1 0	.. 2 10	0 6	.. 1 6
Red	"	3 0	.. 8 0	3 3	.. 5 0
Buchu Leaves	"	0 2½	.. 1 3	0 2½	.. 1 3
CAMPHOR, China ..	per cwt.	102 6	.. 0 0	87 6	.. 90 0
Japan ..	"	105 0	.. 0 0	92 6	.. 95 0
Refin. Eng. ..	per lb.	1 5	.. 0 0	1 3	.. 0 0
CANTHARIDES	"	1 8	.. 4 5	1 11	.. 5 3
CHAMOMILE FLOWERS ..	p. cwt.	40 0	.. 80 0	50 0	.. 200 0
CASTOREUM	per lb.	0 0	.. 0 0	9 0	.. 30 0
DRAGON'S BLOOD, Ip. ..	p. cwt.	100 0	.. 220 0	95 0	.. 260 0
FRUITS AND SEEDS (see also Seeds and Spices).					
Anise, China Star ..	per cwt.	73 0	.. 90 0	93 0	.. 100 0
Spanish, &c. ..	"	23 0	.. 37 0	30 0	.. 35 0
Beans, Tonquin ..	per lb.	3 3	.. 5 4	1 9	.. 5 0
Cardamoms, Malabar					
good	"	6 0	.. 6 6	5 0	.. 5 10
inferior ..	"	2 0	.. 5 10	1 6	.. 4 5
Aleppy ..	"	2 0	.. 6 8	3 6	.. 5 3
Madras ..	"	2 8	.. 4 6	2 2	.. 3 6
Ceylon ..	"	3 0	.. 4 3	3 6	.. 5 0
Cassia Fistula ..	per cwt.	45 0	.. 50 0	0 0	.. 0 0
Castor Seeds ..	"	0 0	.. 0 0	0 1	.. 0 2½
Cocculus Indicus ..	"	7 3	.. 8 3	9 3	.. 11 0
Colocynth, apple ..	per lb.	1 0	.. 1 9	0 0	.. 0 0
Croton Seeds ..	per cwt.	31 6	.. 33 0	30 0	.. 0 0
Cubebs ..	"	37 0	.. 38 0	27 0	.. 27 6
Cummin ..	"	45 0	.. 50 0	18 0	.. 24 0
Dividivi ..	"	10 3	.. 16 0	12 6	.. 16 6
Fenugreek ..	"	0 0	.. 0 0	6 0	.. 13 0
Guinea Grains ..	"	29 0	.. 30 0	28 6	.. 0 0
Juniper Berries ..	"	0 0	.. 0 0	8 0	.. 10 0
Nux Vomica ..	"	9 0	.. 11 6	9 0	.. 14 6
Tamarinds, East India ..	"	12 0	.. 19 0	0 0	.. 0 0
West India ..	"	22 0	.. 31 0	25 6	.. 27 6
Vanilla, large ..	per lb.	16 0	.. 20 0	23 0	.. 28 0
inferior ..	"	12 0	.. 15 6	15 0	.. 21 0
GINGER, Preserved, ..	per lb.	0 5½	.. 0 6	0 4½	.. 0 7
HONEY, Chili ..	per cwt.	0 0	.. 0 0	45 0	.. 50 0
Jamaica ..	"	35 0	.. 41 0	30 0	.. 43 0
Australian ..	"	0 0	.. 0 0	0 0	.. 0 0
IPECACUANHA ..	per lb.	4 6	.. 4 9	5 6	.. 6 0
ISINGLASS, Brazil ..	"	2 7	.. 5 6	3 0	.. 5 2
Tongue sort ..	"	3 6	.. 5 8	3 6	.. 5 7
East India ..	"	1 6	.. 4 7	2 6	.. 5 6
West India ..	"	4 3	.. 5 4	4 2	.. 4 10
Russ. long staple ..	"	6 0	.. 12 0	8 0	.. 15 0
inferior ..	"	0 0	.. 0 0	0 0	.. 0 0
Simovia ..	"	1 6	.. 3 0	1 6	.. 3 0
JALAP, good ..	"	0 11	.. 1 2	0 8	.. 0 10
infer. & stems ..	"	0 9½	.. 0 10½	0 7	.. 0 7½
LEMON JUICE ..	per degree	0 0½	.. 0 1½	0 1½	.. 0 1½
LIME JUICE ..	per gall.	1 3	.. 1 8	0 0	.. 0 0
LIQUORICE, Spanish ..	per cwt.	0 0	.. 0 0	34 0	.. 39 0
Liquorice Root ..	"	0 0	.. 0 0	0 0	.. 0 0
MANNA, flaky ..	per lb.	0 0	.. 0 0	3 6	.. 4 0
small ..	"	0 0	.. 0 0	1 4	.. 1 6
MUSK, Pod ..	per oz.	13 0	.. 54 0	23 6	.. 50 6
Grain ..	"	47 0	.. 62 0	40 0	.. 50 0
OILS (see also separate list)					
Almond ..	per lb.	1 10	.. 0 0	1 9	.. 0 0
Castor, 1st pale ..	"	0 5	.. 0 5½	0 5	.. 0 0
second ..	"	0 4½	.. 0 0	0 4½	.. 0 4½
Cod Liver ..	per gall.	2 9	.. 5 0	3 11	.. 5 6
Croton ..	per oz.	0 2½	.. 0 2½	0 2½	.. 0 2½
Essential Oils:					
Almond ..	per lb.	20 0	.. 0 0	25 0	.. 0 0
Anise-seed ..	"	7 9	.. 0 0	6 3	.. 6 4
Bay ..	per cwt.	0 0	.. 0 0	65 0	.. 70 0
Bergamot ..	per lb.	0 0	.. 0 0	10 0	.. 15 0
Cajuput ..	per bottle	3 6	.. 4 0	3 0	.. 3 6
Caraway ..	per lb.	0 0	.. 0 0	9 0	.. 9 3
Cassia ..	"	2 9	.. 0 0	3 2	.. 0 0
Cinnamon ..	per oz.	4 0	.. 5 6	2 6	.. 5 6
Cinnamon-leaf ..	"	0 1½	.. 0 1½	0 2½	.. 0 3
Citronelle ..	"	0 2½	.. 0 0	0 2½	.. 0 0
Clove ..	"	8 9	.. 0 0	8 3	.. 0 0
Ginger ..	"	0 1½	.. 0 3	0 2½	.. 0 3
Lavender ..	per lb.	0 3	.. 0 0	1 6	.. 7 0
Leban ..	"	4 0	.. 8 0	7 0	.. 9 6
Leban grass ..	per oz.	0 2½	.. 0 0	0 2½	.. 0 2

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Essential Oils, continued:—				s. d.	s. d.	s. d.	s. d.	Oils, continued:—				£ s.	£ s.	£ s.	£ s.				
Neroli	0	0	to	0	0	3	0	WHALE, South Sea, pale, per tin	39	0	to	0	0	35	0	to	0	0	
Nutmeg	0	3	..	0	4	0	4½	..	" yellow, "	29	0	..	0	0	33	0	..	34	0
Orange	5	0	..	7	0	6	0	..	" brown, "	26	0	..	27	0	39	0	..	31	0
Otto of Roses....per oz.	21	0	..	35	0	16	0	..	East India, Fish, "	0	0	..	0	0	25	10	..	0	0
Patchouli	1	6	..	3	0	1	9	..	OLIVE, Gallipoli...per ton	0	0	..	0	0	0	0	..	0	0
Peppermint:									Gioja.....	0	0	..	0	0	0	0	..	0	0
American ....per lb.	10	0	..	12	6	13	0	..	Levant	0	0	..	0	0	49	0	..	0	0
English	21	0	..	23	0	24	6	..	Mogador	0	0	..	0	0	48	0	..	0	0
Rosemary	0	0	..	0	0	2	0	..	Spanish	47	0	..	0	0	50	0	..	59	10
Sassafras	1	9	..	2	0	2	3	..	Sicily	0	0	..	0	0	49	0	..	50	0
Spearmint	0	0	..	0	0	12	0	..	COCONUT, Cochin..	0	0	..	0	0	43	10	..	41	0
Thyme.....	0	0	..	0	0	0	0	..	Ceylon	48	10	..	49	0	38	15	..	39	0
Mace, expressed ..per oz.	0	6	..	0	7	0	6	..	Mauritius ..	47	15	..	48	0	0	0	..	0	0
OPIMUM, Turkey .....per lb.	15	0	..	17	0	16	6	..	GROUND NUT AND GINOLELLY:										
inferior	13	0	..	14	6	10	0	..	Bombay	0	0	..	0	0	0	0	..	0	0
QUASSIA (bitter wood) per ton	100	0	..	130	0	100	0	..	Madras	0	0	..	0	0	0	3	..	0	0
RHUBARB, China, good and									PALM, fino.....	37	0	..	0	0	40	10	..	0	0
fine .....per lb.	1	6	..	3	0	2	3	..	LINSEED	25	15	..	0	0	29	5	..	29	10
Mid. to ord. "	0	9	..	1	4	0	10	..	RAPESEED, English, pale	32	15	..	33	0	39	5	..	0	0
Dutch Trimmed.. "	0	0	..	0	0	0	0	..	" brown	30	15	..	31	0	37	0	..	37	5
ROOTS—Calumba .....per cwt.	20	0	..	45	0	28	0	..	Foreign, pale ..	0	0	..	0	0	41	0	..	0	0
China "	0	0	..	0	0	30	0	..	" brown	0	0	..	0	0	0	0	..	0	0
Chiretta .....per lb.	0	0	..	0	0	0	3	..	COTTONSEED	28	0	..	0	0	32	10	..	0	0
Galangal .....per cwt.	22	0	..	24	0	20	0	..	LARD	39	0	..	43	0	52	0	..	0	0
Gentian "	18	0	..	20	0	20	0	..	TALLOW	30	0	..	38	0	30	0	..	51	0
Hellebore	0	0	..	0	0	0	0	..											
Orris	22	0	..	45	0	26	0	..	TURPENTINE, American, cks.	21	6	..	21	9	24	0	..	0	0
Pelitory	0	0	..	0	0	70	0	..	French	0	0	..	0	0	0	0	..	0	0
Pink .....per lb.	0	0	..	0	0	0	0	..	PETROLEUM, Crudo	0	0	..	0	0	0	0	..	0	0
Rhatany	0	2	..	0	5	0	3	..	refined, per gall.	0	7½	..	0	0	0	11½	..	1	0
Seneka	2	4	..	2	8	3	6	..	Spirit	0	7½	..	0	8½	0	8½	..	0	9
Snake	0	10	..	1	0	0	6	..	SEEDS.										
SAFFRON, Spanish ..	20	0	..	40	0	20	0	..	CANARY.....per qr.	50	0	..	65	0	52	6	..	60	0
SALEP	140	0	..	200	0	240	0	..	CARAWAY, English per cwt.	0	0	..	0	0	43	0	..	45	0
SARSAPARILLA, Lima per lb.	0	4½	..	0	6	0	5	..	German, &c....	32	0	..	36	0	48	0	..	49	0
Guayaquil	1	3	..	1	5	2	2	..	CORIANDER	16	0	..	21	0	18	0	..	23	0
Honduras	1	0	..	1	4	0	11	..	HEMP.....per qr.	35	0	..	49	0	0	0	..	0	0
Jamaica	1	0	..	1	7	1	3	..	LINSEED English	60	0	..	68	0	0	0	..	0	0
SASSAFRAS .....per cwt.	9	0	..	11	0	9	0	..	Black Sea & Azof	47	0	..	0	0	57	0	..	0	0
SCAMMONY, Virgin ..per lb.	0	0	..	0	0	24	0	..	Calcutta	48	0	..	43	3	55	3	..	0	0
second & ordinary "	0	0	..	0	0	6	0	..	Bombay	50	0	..	0	0	57	6	..	0	0
SENNA, Bombay	0	1	..	0	2½	0	1	..	St. Petersburg, "	0	0	..	0	6	54	0	..	55	0
Tinnivelly	0	2	..	1	7	0	1½	..	Mustard, brown..per bshl.	14	0	..	17	0	0	0	..	0	0
Alexandria	0	4	..	1	6	0	5	..	white ..	10	0	..	13	0	16	0	..	18	0
SPERMACEITI, refined "	1	4	..	0	0	1	4	..	POPPY, East India, per qr.	49	0	..	50	0	58	6	..	0	0
American	1	0	..	1	2	1	2	..	SPICES.										
SQUILLS	0	2½	..	0	3	0	2½	..	CASSIA LIGNEA ..per cwt.	38	0	..	50	0	45	0	..	60	0
									Vera	22	0	..	36	0	22	0	..	45	0
									Buds	56	0	..	53	0	68	0	..	70	0
GUMS.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.		CINNAMON, Ceylon:										
AMMONIAC drop .. per cwt.	2	0	..	2	3	2	2	..	1st quality .....per lb.	1	8	..	3	6	2	1	..	3	8
lump.. "	0	15	..	1	18	0	18	..	2nd do. "	1	6	..	2	6	1	10	..	2	10
ANIMI, fine washed "	13	15	..	15	0	11	0	..	3rd do. "	1	5	..	1	11	1	9	..	2	5
bold scraped "	12	0	..	13	10	9	15	..	Tellicherry	1	11	..	2	5	2	6	..	2	10
sorts	9	2/6	..	11	15	6	15	..	Chips	0	2½	..	0	5½	0	3½	..	0	6½
dark	4	15	..	8	10	4	0	..	CLOVES, Penang	1	8	..	1	10	2	0	..	0	0
ARABIC, E.I., fine									Amboyua	1	4	..	1	6	1	4	..	1	6
pale picked .. "	2	15	..	3	5	3	0	..	Zanzibar	1	2	..	1	3	1	2	..	1	3
srts., md. to fin. "	2	2	..	2	14	2	5	..	GINGER, Jam., fine per cwt.	90	0	..	200	0	91	0	..	202	6
garblings .. "	1	3	..	2	0	1	6	..	Ord. to good "	54	0	..	80	0	53	0	..	90	0
TURKEY, pick. gd. to fin. "	5	10	..	9	0	3	0	..	African	21	0	..	22	0	25	0	..	26	0
second & inf. "	3	5	..	5	5	2	10	..	Bengal	16	0	..	0	0	22	0	..	22	6
in sorts .. "	2	5	..	2	7/6	1	15	..	Malabar	0	0	..	0	0	26	0	..	28	0
Gedda "	1	10/6	..	1	14	0	0	..	Cochin	46	9	..	125	0	50	0	..	115	0
BARBARY, brown.. "	2	16	..	3	2	0	0	..	PEPPER, Bk., Malabar, per lb.	0	4	..	0	4½	0	4½	..	0	5½
AUSTRALIAN	1	15	..	2	10	0	16	..	Singapore	0	3½	..	0	3½	0	3½	..	0	0
ASSAFETIDA, em. to fin "	0	13	..	2	2	0	16	..	White Tellicherry "	0	0	..	0	0	0	10	..	1	4
BENJAMIN, 1st & 2nd	20	0	..	70	0	0	0	..	Cayenne	1	4	..	3	1	1	6	..	3	0
Sumatra 1st & 2nd	7	0	..	15	0	6	7/6	..	MACE, 1st quality ..	1	9	..	2	7	2	4	..	3	6
3rd "	2	10	..	6	10	3	9	..	2nd and inferior ..	1	0	..	1	8	1	0	..	2	3
COPAL, Angola red "	0	0	..	0	0	6	0	..	NUTMEGS, 78 to 60 to lb.,	3	9	..	5	0	3	19	..	4	6
Benguela .. "	0	0	..	0	0	4	0	..	90 to 80 .. "	2	10	..	3						



CORRESPONDENTS will please observe that communications for this column must be received not later than the 10th of each month. Queries of purely personal interest should be sent for the "Information Wanted" section of our "Exchange Column." Anonymous queries will not be attended to. Readers are requested to contribute items of information to this department.

The Dentists Act.—We have nearly twenty letters from correspondents respecting registration under the new Dentists Act. Nearly all these ask questions which we have already answered. The following will answer all the cases put to us:—

The first thing to do is to apply to the Registrar, W. C. T. Miller, Esq., Medical Council Office, 315 Oxford Street, London, W., for a form of application. The omission to send this in one case brought before us must be, we imagine, accidental.

Chemists and druggists who have been in the habit of practising dentistry in conjunction with pharmacy can fill up the form supplied to that effect, and return it to the Registrar, with a fee of 2*l.*, if sent in previous to the end of this year.

If they have only practised one branch of dentistry—the extraction of teeth, for example—that is quite sufficient to justify them in subscribing the declaration. This, we should add, is not merely our own opinion, but is likewise held by the gentlemen who prepared the Act.

A person is not obliged to register in order to be able to continue the practice of dental surgery. But an unregistered person will not be able to sue for his charges in any court of law, nor will he be able to use or exhibit the name or title of "dentist" alone or in combination, or any name, title, addition, or description implying that he is a person specially qualified to practise dentistry.

G. H. asks if an unregistered person can expose in his window or advertise in any paper the words "Teeth carefully extracted." We think there is no doubt he could. Those words surely cannot be considered as any name, title, addition, or description, implying that the person using them is specially qualified to practise dentistry.

H. P.—There is a special section in the Act meeting your case. Any dental pupil whose term will expire before January 1, 1880, is eligible for registration, and the General Medical Council may grant dispensation to others.

One other question has been submitted to us, namely, whether an assistant to a chemist and druggist, if he (the assistant) has *bond fide* practised any branch of dentistry can claim registration. We think he can. He is asked for nothing more than a declaration that he has been (before July 22, 1878) engaged in the practice of dentistry in conjunction with pharmacy, and he must decide for himself whether he can truthfully say "Yes" to that.

Finally, it may be as well to mention that the Registrar will not give any interpretation of the Act himself. When any such question is submitted he returns a printed reply referring the applicant to a solicitor.

X. Y. Z. sends a patent medicine list, advertised in the *Leeds Express*, offering the chief patents at a shade over cost price. He says:—"I consider this a great injustice to chemists, and that the Pharmaceutical Society ought to try and do something in the matter to stop it. I suggest that a petition should be got up and sent to Parliament as soon as possible, proposing the increase of the patent medicine licence from 5*s.* to 1*l.* a year, and restricted to chemists only."

5/225. *Dressing Seed Wheat to prevent Rooks from taking it.*—"Mr. J. Bull" (Cambridge) informs "J. J. P." (Lichfield) that Calvert's carbolic acid, No. 5, in the proportion of 1 oz. of acid and 1 quart of water to each bushel of wheat, will answer well.

Cleaning Discoloured Whisky.—"An Irish Chemist" notes query in September number concerning iron in whisky. Irish whisky, if "aged" in sherry casks, always contains tannin; if new, comparatively, and stored or blended in extensive tuns or vats (oaken, of course), tannin will be present. Accidents such as complained of by "Alpha" are frequently occurring with some of the traders in whisky in Ireland, and it may be some satisfaction to know that the inky colour resulting may be completely got rid of by "rummaging" in thoroughly some freshly-burned or re-burned granular animal charcoal in the proportion of, say $\frac{1}{2}$ oz. to the gallon if for a large quantity, more if the quantity to be decolourised be under 10 gallons. Re-distillation would be a very troublesome and expensive cure, owing to the red taint of the Excise.

20 229. *Cabbage Oil.*—(C. L. M. Stornoway).—Cabbage oil is simply another name for colza oil. P. L. Stummons says that in the French lighthouses it is preferred to any other oil in use, on account of its greater brilliancy and steadier flame, its greater cheapness, and the fact that less wick is charred in its use. It is called cabbage oil because some of the seeds from which

it is expressed are those of a variety of cabbage, *Brassica campestris*. We imagine you will now have no difficulty in obtaining a supply.

50/229. 1.—*Show Colours.*—"Chromium" writes:—"One of your correspondents some time ago gave the following as a colour for show-bottles:—

Acid salicylic	1 grain
Sp. vini rect.	5 <i>lj.</i>
Tr. ferri perchlor.	5 grains
Aque	q. s.

This forms a beautiful violet, but, unfortunately, it is unstable; the solution becoming perfectly colourless after being exposed to the light for a few weeks. Can anything be done to make it permanent? Would it answer the purpose if earboys were made of coloured glass instead of being filled with heavy-coloured solutions? We do not think it is possible to make the salicylate of iron solution permanent. It seems the invariable characteristic with organic colouring matters that they should fade sooner or later when exposed to the light. We think earboys of coloured glass would answer every purpose, but they would be far more expensive than white ones. Some of the wholesale houses supply a cobalt solution which is a very rich crimson violet, and seems never to fade. It is an expensive colour.

50/229. 2.—*Ung. Resinæ.*—"Chromium" asks:—"What colour should ung. resinæ be? Most wholesale houses send it out nearly the colour of ordinary brown paper. If made with resinæ flava it is of a pale straw colour." The colour of unguentum resinæ entirely depends on the colour of the resin and wax employed. We have never felt satisfied in sending out brown-paper tinted samples. If a nice bright sample of beeswax, and a clear bright sample of resin be used, the ointment may often be made of a gamboge yellow. But it is not always possible to get just the kinds of resin and wax you require. Squire says the ointment should be dusky yellowish brown, but as both resin and wax naturally vary in colour, it is difficult to get two samples of it alike in colour. We prefer the lighter colours, as much care must have been exercised in selecting the materials. Resinæ flava, the opaque resin, should never be used, as it contains about one-eighth of its weight of water.

50/229. 3. *Fig Powder.*—This is probably a mistake for crow fig powder, or *Nux vomica*, formerly sold in powder for poisoning crows, &c. It is now illegal to expose poisoned wheat, and the *Nux vomica* is much less used in consequence.

50/229. 4. *Syrup of Cupmoss.*—The cupmoss was formerly called *Muscus*, or *Lichen pyxidatus*, *Lichen coccineus*, &c. It was formerly much used, and still is by the common people, in decoction as a cure for whooping cough. Syrup of cupmoss, or *Syrupus musci pyxidati*, is made by macerating for a few hours 1 oz. of cupmoss in a pint of boiling water, straining, and adding 3 lbs. of sugar.

10/227. *Ink that is not Permanent.*—"Bob" will find just what he wants on page 252 of the June number of THE CHEMIST AND DRUGGIST, and in the Diary, which will reach our subscribers in the course of a few days.

14/229. *Dissolved Bones.*—J. S. B.—If you are thinking of making dissolved bones as a commercial speculation, you had better apply to a chemical manne maker for instruction. "Chnreh's Laboratory Guide for Agricultural Chemistry" (Van Voorst, 6*s.* 6*d.*) will give you an account of the manufacture. Dissolved bones are so called, not because they are in solution, but because the phosphate of lime they contain has been largely converted into the soluble acid phosphate.

22/227. *Sheep Dips (Oveo).*—McDongall's Sheep Dip is a preparation of earbolic acid; we do not know the nature of Cooper's. The following is a formula for a really good sheep dip, which resembles that recommended by the Australian Government Commissioners appointed to report on the spread of scab in the colony.

Common size	1 oz.
Soft soap	1 oz.
Melt together, and add—	
Glycerine	1 fl. oz.
Brown earbolic acid	1 fl. oz.

To make a dip dissolve 1 lb. of the mixture in 2 quarts of boiling water, and add 2 gallons of cold water. We do not know of any work on sheep dipping; but Beasley's "Druggist's Receipt Book" gives some formulæ.

50/226. *Aniseed Cordial* ("A. P." London).—There are several formulæ for aniseed cordial. The following is as good as any:—

Essential oil of anise	1½ drachm
Dissolve in	
Proof spirit	3 pints
Take	
Sugar	3 lbs.
Water	5 pints

Dissolve and mix with the spirit while still warm, being careful to avoid evaporation as much as possible. If not perfectly bright, clarify with isinglass.

4/228. 1. *Glycerine Jelly (Rondeletia).*—We are much surprised to hear that your glycerine jelly, made with starch or gelatine, does not keep. We

suppose the glycerine is above suspicion - not adulterated with syrup, and of fair specific gravity. If this is so, we should advise you to try selected tragacanth, or the new article known as agar agar or Chinese gelatine. The two following formulæ were published in the last volume of THE CHEMIST AND DRUGGIST. No. 1 gives an opaque and No. 2 a transparent preparation :-

No. 1.

Mix in a mortar						
White soft soap	..	..	..	..	..	4 oz.
With						
Glycerine	..	..	..	..	..	6 oz.
Mix						
Oil of thyme	..	..	..	..	..	2 drachms
With						
Almond oil	..	..	..	..	..	4 lbs.

And add this gradually to the glycerine and soap, taking care to incorporate each portion thoroughly before adding any more oil.

No. 2.

Dissolve						
Transparent soap	..	..	..	..	..	1 oz.
In						
Water	..	..	..	..	..	4 oz.
Glycerine	..	..	..	..	..	4 oz.
With the aid of beat.						
While still warm add						
Glycerine	..	..	..	..	..	20 oz.

And when cold, add perfume to taste, and pour into glass jars. It is pale amber in colour.

4/228. 2. (*Rondeletia*).—There are so many works on the venereal diseases that it is impossible for us to say which is the best. The following are a few of the best known:—Aeton's "Reproductive Organs," which you will often see advertised in our Exchange Column; C. R. Drysdale, "Syphilis: Its Nature and Treatment," 4s. 6d.; F. B. Courtenay, "Functional Derangements and Debilities of the Generative System," 3s.; J. Morgan, "Practical Lessons in the Treatment of the Affections Produced by the Contagious Diseases," 5s. By the Homeopathic Publishing Company; W. Morgan, "Contagious Diseases." By Longmans: Vol. 5 of Holmes's "System of Surgery," sold separately, 21s.

7/214. (*Lancashire*).—See the answer to ("Rondeletia") 4/228. 2.

22/228.—*Dentists' Journal* (Wm. Pickup).—The *British Journal of Dental Science*, now in its 21st volume, is published by J. & A. Churchill, New Burlington Street, London, price 1s.

28/228. *Eucalyptus*.—Apprenticeship is a contract which is dissolved by the death or bankruptcy of the master, and we should presume it is equally cancelled by a mental affliction causing inability on his part to teach the business, which is his part of the contract. You would certainly be justified in asking that the indentures should be cancelled in such a case, to which course we should suppose there would be no objection. Not having paid the second moiety of the premium, you are in the position known to the law of *beati possidentes*, and if the remainder of your premium should be demanded we should advise you at once to consult a solicitor.

2/230. *G. S. S.*—The words "For toothache" on your label render the medicine liable to stamp duty. If you omit these words, and do not by any handbill or advertisement recommend the preparation for the relief of any ailment, nor claim an exclusive right of preparation, it would, in our judgment, pass without the stamp.

15/228. *Amateur Printing Presses*.—Referring to our note of last month on these, Mr. C. Stevens, of Weir, Dulveston, sends us some samples of work done by Jabez Franceis's press. We mention these, as the samples sent are certainly equal, if not superior, to any we noticed last month.

11/223. *Rathdrum*.—Goddard's "Chemist's Price Book," published by J. Goddard, of Leicester, at 5s., will meet your wants.

Mr. A. Sauden (London, S.W.) writes:—Your correspondent of last issue, "H. H. Newferry," may easily make Muc. Tragac. B.P. without the addition of gum acacia, in about two minutes if he proceeds in the following manner. Suppose he requires 3vi. muc. tragac. B.P.; first put into the mortar about 3ij. of water and rub round the pestle a few times so as to well wet the sides, then sprinkle in 2 or 3 grains of the powdered tragac whilst continually stirring; now add about 3ss. more water, and then sprinkle in the remainder of the powder, stirring continually, then remainder of the water gradually; a little practice, and it is easily done. Of course if there is any spirit or rectified tincture ordered in the mixture there is not the slightest trouble, providing you first rub down the tragac with it; then add the water, not by degrees, but $\frac{1}{2}$ oz. at a time.

17/230. *Tinct. Quillaiæ Comp. (Saponaria)*.—We have never met with compound tincture of quillai bark and do not know that the bark is used in this form. It is usually prescribed in the aqueous infusion or in the simple tincture. The latter is made by macerating for seven days 2 troy ounces of the bark in a mixture of 8 fl. oz. each of alcohol and water.

23/230.—*Blasphite of Lime (Lomax)*.—The most economical way of obtaining this article is to purchase in bulk from a manufacturer. The

process of manufacture consists, we believe, in passing sulphurous oxide into milk of lime to saturation.

Messrs. Kernick & Son (Cardiff) (44/225).—We should advise you to apply to Mr. Paul Melderer, 37 Farringdon Street, London.

A *Herbalist* (61/225) claims from our sense of honour the correction of a paragraph in our last issue, in which we stated, under Bradford news, that a herbalist of that town had been committed for trial on a charge of having sought to procure abortion. "A Herbalist" informs us that the person so charged is a registered chemist and druggist.

THE CHEMICAL SOCIETY.

Thursday, November 7.

DR. GLADSTONE, President, in the chair.

The following papers were read:—

"Contributions from the Laboratory of Tôkio, Japan;" "On the Red Colouring Matter of the *Lithospermum Erythrorhizon*," by M. Rubara. The purple colouring matter was prepared from the root by extracting with alcohol, purifying by treatment with lead acetate, &c.; it forms a dark resinous uncrystallisable mass, with a metallic green reflection, soluble in alcohol, ether, and benzol, but almost insoluble in water; it resembles in some respects antracanthin, the colouring matter from alkanet. A bromine and a chlorine compound were prepared.

"A Second Report on some Points in Chemical Dynamics," by C. R. A. Wright and A. P. Luff. The authors have continued their previous research, and have determined the temperature of initial action of carbonic oxide, hydrogen, and carbon, on various oxides of iron, manganese, lead, cobalt, and nickel. They find that the general law holds good that the temperature of the action of carbonic oxide lies below that of hydrogen, which again is below that of carbon. This rule appears to be a special case, governed by the general law that, *ceteris paribus*, the greater algebraically is the heat evolution taking place during a reducing action on a metallic oxide, the lower is the temperature at which the action is first noticeable during a few minutes' action.

"Note on the Constitution of the Olefine produced by the Action of Zinc upon Ethylic Iodide," by Dr. Frankland and Mr. Dobbin. The gas given off was passed through alcohol and sulphuric acid, and then absorbed by antimonious chloride. On treating with water and distilling, a chloride was obtained boiling at 83° C.; it was therefore ethylenic and not ethylenic chloride.

"On the Occurrence of Certain Nitrogen Acids amongst the Products of the Combustion of Coal-gas and Hydrogen Flames," by L. T. Wright. The author proves that the origin of the nitrogen acids found in the condensed water procured by burning coal-gas or hydrogen in the air is ammonia, either free or combined, no such acids being produced when the gases are carefully freed from ammonia.

"On the Action of Bromine upon Sulphur," by J. B. Hannay.

"Researches on Dyeing, Part I.;" "Silk and Rosanilin," by Dr. Mills and Mr. G. Thomson. The authors have investigated the nature of the transaction which occurs when a vat is exhausted of its tinctorial ingredients. The experiments consisted in immersing a constant area of white silk in a solution of a rosanilin salt at a constant temperature for varying times, and then determining the loss of strength of the rosanilin solution.

"Comparison of the Actions of Hypochlorites and Hypobromites on some Nitrogen Compounds," by H. J. H. Fenton. The compounds selected were ammonium carbamate and guanidine.

"Notes on Two New Vegeto-alkaloids," by F. Von Müller and L. Rummel. The authors have prepared alstonin from the bark of *Alstonia constricta*, and duboisin from the leaves and twigs of *Duboisia myoporoides*; it closely resembles piturin.

"On the Determination of Lithia by Phosphate of Soda," by C. Rammelsberg. The author confirms his previous results as to the formation of a double salt of sodium and lithium phosphate, and the consequent inaccuracy in lithia determinations made by Mayer's method; and he also gives some analyses of lithia micæ.